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REPORT RESUMES

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A STUDY OF VALUES AS DETERMINANTS OF EDUCATIONAL-VOCATIONAL CHOICES IN HAWAII.
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THIS STUDY INVESTIGATED THE ROLE OF VALUES IN THE SELECTION OF AN EDUCATIONAL PROGRAM BY PUBLIC SCHOOL AND UNIVERSITY STUDENTS. A QUESTIONNAIRE WAS ADMINISTERED TO A SAMPLE OF 25 PERCENT OF ALL SIXTH-GRADE STUDENTS, 75 PERCENT OF THE STUDENTS IN GRADES 9 AND 12, AND 75 PERCENT OF THOSE ENROLLED IN ADULT EDUCATION CLASSES IN THE PUBLIC SCHOOLS. ALSO, FRESHMEN AND SENIORS AT LAND-GRANT UNIVERSITIES WERE INCLUDED IN THE SAMPLE. DATA WERE COLLECTED ON EACH STUDENT'S BACKGROUND, PERSONAL CHARACTERISTICS, AND RESPONSES TO THREE CHECKLIST QUESTIONS CONCERNING VALUES, EXTERNAL INFLUENCES, AND INTERESTS WHICH HELPED TO DETERMINE EDUCATIONAL AND POST-EDUCATIONAL CHOICES. THE PRESENT STUDY SUGGESTS THE IMPORTANCE OF PROVIDING SPECIFICALLY FOR THE UNCERTAIN STUDENT AT ALL LEVELS IN DESIGNING CURRICULUMS, PROGRAMS, AND COLLEGES. PERHAPS SO-CALLED EXPLORATORY PROGRAMS ARE THE ANSWER, PROVIDING FOR RELATIVELY EASY TRANSITION TO PROGRAMS WITH NECESSARILY RIGID SEQUENCES. ARRANGEMENTS FOR RAPID RETREADING MIGHT BE DESIRABLE FOR THE SOPHOMORE WHO WANTS TO TRANSFER FROM ENGLISH TO CIVIL ENGINEERING OR FOR THE HIGH SCHOOL SENIOR WHO SHIFTS HIS OBJECTIVES FROM APPRENTICESHIP TO COLLEGE. UNFORTUNATELY, THE APPARENT DESIRABILITY OF EDUCATIONAL REVERSIBILITY SEEMS TO BE COUNTERBALANCED BY AN INCREASING RIGIDITY IN ENTRANCE REQUIREMENTS. IT WAS CONCLUDED THAT A MORE TIGHTLY CONSTRUCTED THEORY WOULD BE HIGHLY DESIRABLE IN CONTROLLING AND UNDERSTANDING EDUCATIONAL CHOICE AND IN CONTRIBUTING TO KNOWLEDGE OF THE GENERAL PRINCIPLES OF DECISION MAKING. (JL)

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A STUDY OF VALUES AS DETERMINANTS OF EDUCATIONAL-VOCATIONAL CHOICES IN HAWAII

Cooperative Research Project No. 757

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COOPERATIVE RESEARCH PROJECT NO. 757

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November, 1961

The research reported herein was performed pursuant to a contract with the United States Office of Education, Department of Health, Education and Welfare

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Conducted by a university research center, this project has depended upon the cooperative participation, the time and resources, of many federal and state agencies. The pilot studies on educational choice which preceded the Office of Education grant were coordinated with annual surveys of the plans of secondary school seniors in Hawaii. Since 1952 these senior surveys have been conducted by the Hawaii Department of Education with the Department of Labor under the sponsorship of the Joint Committee on Guidance and Employment of Youth.

Each of the six surveys upon which this report is based was a collaborative venture. As members of the Psychological Research Center of the University of Hawaii, the project team worked with the Office of Research and Statistics of the Department of Education and the Division of Guidance Services in developing and administering the 6th and 9th grade surveys; also with the Department of Labor on the 12th grade survey; with the Office of Student Personnel of the University of Hawaii on the college freshman and college senior surveys; and with the Adult Education Service on the Adult survey. Data processing facilities of the Department of Education, of the IBM Office and of the Computing Center at the University of Hawaii and of the Western Data Processing Center were used. Some of the costs of preparing this final report were assumed by the Office of Research and Statistics of the Department of Education and by the Committee on Research and Graduate Study of the University of Hawaii.

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CHAPTER I

THE PROBLEM

As each young person climbs the educational ladder in America, he is faced with a series of choices. He, or rather his parents, must choose a school when he enters the first grade. Obviously in most communities if a public is preferred to a private elementary school, then the choice of school will depend upon the parents' residence -- a choice which, in its turn, has a multiplicity of determinants. Beginning customarily about the seventh grade, he may be given some choice among possible elective courses in his annual programs. Depending upon the size of the community and the structure of its school system, he may not only have to choose among elective courses and among various programs, but also among a number of kinds of secondary school -- public, parochial, college preparatory, technical, etc. Depending upon his state and its laws on compulsory school attendance, at some point during adolescence he must decide whether to remain in high school at all or to drop out before graduation.

After he has received his secondary school diploma, he must decide whether to continue his education. If he prefers to continue, as approximately half of mid-century high school graduates do, he must choose between the various types of training open to him and he must then pick a school. Should he elect one of the approximately 1800 American higher educational institutions he must choose among fields of specialization. The number of possible colleges and of majors or curricula within colleges will depend upon the size and administrative organization of the institution as well as his choice of preparatory programs. Over 250 "career curricula" are listed by Lovejoy (1956). Once enrolled in a college, the young person faces the possible decisions to withdraw, to transfer to another college within or without the same institution, or to select another major field. In some colleges, as for example, engineering, the choice of an educational specialty must be made before he enters his first class if he is to avoid the risk of delaying the accumulation of sufficient credits to earn his degree in the customary four years. In other colleges, especially liberal arts, he may postpone the specification of his major until his junior year.

If he earns the baccalaureate, once more he must decide whether to continue his education or to pursue other plans. If, like approximately half of American college graduates, he goes on to a graduate or professional school, again he must pick the specific school. His choice of an educational specialty will probably have been narrowed but it is still rarely completely cut and dried. The typical baccalaureate in sociology, let us say, might with little difficulty or delay continue in any one of dozens of graduate specialties in the behavioral sciences or in such professional schools as social work or education. Finally, once again, after he has enrolled, he may have the option to discontinue or transfer.

Supposing that the young person disengages himself for any reason from any rung of the educational ladder, still, throughout his life span he may at any time return to school. Civilians and military personnel are frequently given opportunities to return to the classroom, usually on a part time basis in the evening. It is a safe generalization that Americans are a nation of school goers. In 1949, for example, 1,465,000 adult citizens between 20 and 29 were in school (U.S. Bureau of Census, 1952).

Thus, we may conceive of the individual in the American educational system (and those concerned about him) as making a series of choices, each of which leads to an educational or non-educational position (Tiedeman, O'Hara, & Matthews, 1958). Each educational position or training experience varies in the following characteristics among others: requirements for admission, including successful completion of preceding positions and financial demands; number of available options such as programs, courses, curricula; generality; flexibility; reversibility; and immediate and long-range opportunities upon completion, for example, a vocational or military position or a pre-professional educational position. To an extent, then, preceding choices shape the sequence of positions held by the student. Choices which fail to take into account realistically such personal characteristics as motivation, preparation, and aptitude may lead to frustration for individuals and, on a more general scale, to misuse of the nation's human resources.

What Determines Educational Choice?

Our interest is in the determinants of these educational choices. To some extent, of course, we can understand why these choices are made from our common knowledge, from empirical observation, and from direct experience. We, and our readers as products of the system, already do indeed know something about it. We scarcely need to document the importance to these educational choices of family finances, of national employment needs, or of prior academic performance. But, much less clear is the operation of psychological and sociological variables.

We assume that if we can identify and describe some of these psychological and sociological variables, we can improve the prediction and control of educational choices. We assume that educational administrators, counselors and teachers will then be able to improve their procedures, to help young persons and their parents in making sounder choices. We assume that the national welfare will be served when better use is made of manpower resources. We do not, of course, mean to encourage the ultimate manipulation of such choices through some sort of hidden persuasion. The emphasis of our research should not preclude the assumption at all that the individual in a democratic society has the right to make his own choices, even though they may appear to be contrary to his best interest or that of the nation.

The present study approaches the problem of educational choices through a series of questionnaire surveys administered during 1959 and 1960 to large samples of the following student populations in Hawaii: 6th, 9th and 12th graders, state university freshmen and seniors, and adults enrolled in evening programs. Although each questionnaire had in common 35 check list items relating to the determinants of educational choice, each survey can be considered as an independent operation with unique by-products. For example, from the survey of 12th grade students it was possible to estimate the number of high school graduates who would enter the labor market during summer and fall 1960.

We feel that Hawaii was an especially happy site for this investigation because -- although quite certainly as American as California or Maine in standard of living, customs, speech, economic and social institutions, perspectives, attitudes and traits, and daily routines -- its national-ethnic origins are more polyglot, including persons of Occidental, Oriental, and Polynesian backgrounds, and its experimental populations are somewhat less mobile than other states (Lind, 1955). We reasoned that as a somewhat self-contained social system, Hawaii might lend itself well to a study of the determinants of educational-vocational choices at various levels. We saw also a unique opportunity to investigate the influence of cultural background in a new and dynamic state.

Definitions

We have outlined the broad problem, indicated its importance in educational practice, and described our present survey approach. In the remainder of this chapter we shall consider some of the relevant studies which have been completed on the sociological and psychological determinants of vocational-educational choice. As a further basis for the investigation of the problem, our theoretical assumptions and consequent methodological preferences will be made more explicit. We shall justify some of our procedures and decisions and describe our approach to educational choice and to values as central concepts. We may then pose our hypotheses in the form of specific questions. However, before continuing it is important to define briefly the use of certain key terms.

The expression educational-vocational choice, as used interchangeably with educational choice, program preference, and position choice, will be applied to certain broad options at the various educational levels under investigation. That is, to five secondary school study programs, five post high school plans, five undergraduate colleges, and eight adult class activities. Technically, a number of possible different educational, vocational, or military positions might be entered by electing the same option (Shartle, 1959) (Tiedeman et al,.1958). Thus, all those seniors at the University of Hawaii majoring in chemistry are in the same educational position and are included with sociology, art and other majors as having elected to register in the College of Arts and Sciences.

Sociological determinants would include demographic attributes such as distributions of paternal occupation, national-ethnic ancestry, and generation in the United States. Psychological determinants refer to personal characteristics such as abilities and attitudes. Certain attitudes are categorized as external influences, interests, and general values. External influences refer to various persons and experiences reported to have contributed in some way to educational choice; interests include specific types of activities or objects, a liking for which was said to have led to the choice; and values in this report refer to considerations of worth ascribed to the position elected. These definitions have been drawn largely from English and English (1958) and will be expanded later in this chapter.

Sociological Determinants

Such sociological determinants as social class, father's occupation, parental education, family income, national-ethnic and religious background, place of residence, and nationality have been related not only to vocational (Friend and

Haggard, 1948; Galler, 1951; Moser, 1952) but to educational choice. Holding ability constant, Pohlmann (1956) showed that eighth grade graduates who transferred to a private secondary school differed significantly on socio-economic indices. Hieronymus (1951) established a significant relationship between "anxiety for education" and socio-economic status in 9th grade students. At Lynd's Middletown Central High School (Lynd & Lund, 1929) pupils of lower social class backgrounds were more frequently registered in practical and vocational programs, as was true of Elmtown's junior high youth twenty years later (Hollingshead, 1949). The correlation (C) between social class position in Elmtown and choice of high school curriculum was 0.39. When Kahl (1953) analyzed the educational and occupational ambitions of public high school sophomores and juniors, he established that IQ and family status were significant predictors. Davie (1953) attempted to study all children 16 or 17 years of age in New Haven. The parents were stratified socially according to ecological area of residence: "striking differences" were found with respect to the proportion of children from different areas who were not in attendance in school, who were enrolled in trade school, high school, private secondary school, liberal arts college and university and post-secondary vocational school.

Bendix and Lipset (1953) in summarizing unpublished survey reports of the National Opinion Research Center commented on the differential emphasis among economic classes upon college education as an essential to advancement. Classifications were by economic level, occupation, education and monthly rental. Warner, Havighurst, and Loeb (1944) in their classic interpretation of how school and curriculum serve as the pathway to success in America reported that college expectations within classes differed between Yankee City and Hometown.

Using Edwards' occupational classification according to socio-economic groups, Mulligan (1951) showed that both veteran and non-veteran students enrolled in the University of Indiana just after World War II reported proportionately more fathers who were professional men, proprietors, and clerical workers and fewer who were semi-skilled and unskilled workers than the Indiana adult work force.

Little (1958) found similar relationships in analyzing the plans of Wisconsin high school graduates by father's occupation. However, differences in college expectation between occupational classifications narrowed when the parents had equivalent educational backgrounds.

Berdie's report (1954) on a comprehensive sample of over 20,000 Minnesota high school graduates concluded that desire to attend college was closely related to class structure, as well as to economic and cultural status, parental values, sex, and place of residence. In the study of Elmtown's youth (Hollingshead, 1949) choice of a junior high school curriculum was associated with occupation of the chief breadwinner.

Gropper and Fitzpatrick (1959) after investigating the decision to attend graduate school concluded that college graduates who continue their educations are "mostly men with high college grades and whose fathers have high occupational status and educational attainment but undistinguished incomes. And to professional schools go mostly men whose grades are less distinguished but whose fathers have more distinguished incomes."

Goetsch (1940) followed up 560 able Milwaukee high school seniors just before World War II during a period of economic depression. She found a close relation between parental income and higher school attendance. In addition the high students tended to go into law, medicine and dentistry, letters and science or liberal arts, and engineering.

Goetsch also pointed out an association between national-ethnic and religious background and college attendance. Proportionately more of Jewish and Scandinavian and fewer of French, Italian and Greek parentage attended college. Her classification was confusing because it included nationality groups, racial groups, and a religious group. The factor of family income was not controlled. Strodtbeck's carefully designed comparison of family interactions in Jewish and Italian homes (McClelland, Baldwin, Bronfenbrenner, and Strodtbeck, 1958), matched for socioeconomic status, suggested that boys tended to generalize their experience with power at home in formulating ideas about their educational futures. The Jewish boys more frequently had college aspirations.

The relation between social class structure and American education is complex, as Gross (1953) has pointed out. Behavioral scientists disagree in their operational definitions of major variables. See, for example, Centers (1949) on social class and Shartle (1959) on occupational classification. Also large sample studies often obscure within group individual differences. Kahl (1953) after interviewing 24 "common man boys" from his large sample of 3971 concluded that "...although there were general ways of life which identified the common man class, some members were content with that way of life and others were not." Disparate, heterogeneous influences operated on boys from apparently similar backgrounds. Havighurst (Lloyd-Jones and Smith, 1954) has noted a trend for increasing numbers of children from working class families to aspire toward college.

Psychological Determinants

Sociological determinants of educational choice may be conceived as gross descriptive attributes. We may also consider student choices at various educational levels in terms of talent or general ability and school achievement, expressed vocational objectives, interest patterns, general personal values, and of external influences.

Although it is well known that students who score higher on tests of general aptitude, individual intelligence, and of achievement, who earn higher grades, and who rank higher academically than their peers tend to select more difficult programs and to continue in school (Berdie, 1954; Educational Testing Service 1957; Wolfle, 1954), a number of specialists have been concerned about the loss of talent. Havighurst (Lloyd-Jones and Smith, 1954) noted that 4 out of every 10 in the upper 10 percent of ability lack motivation for college. Little (1959) reported that approximately 3 out of every 10 Wisconsin high school graduates in the top quarter of scholastic promise did not plan on college. In addition, about 15 percent of a representative sample of top-ranking high school graduates entered, but failed to complete two years of college. In Minnesota Berdie (1954) found almost 10 times as many senior girls as boys in the upper 5 percent did not expect to enter college. Educational Testing Service (1957) on the basis of a national survey of college plans estimated that over 140,000 "bright" boys and girls graduating from public high schools each year would enroll in college if scholarship help were available. Others (McClelland et al, 1958) have suggested that the real solution might be to develop interests, values, and motives, perhaps by increasing counseling services to parents and children at the 7th and 9th grade levels.

Occupational objectives are sometimes considered as interchangeable with educational programs; it is assumed that educational choices are similar to vocational choices. Many investigators have noted that those parents who perceive education primarily in an economic context (Davie, 1953; Kahl, 1953; Berdie, 1954) press for different kinds of educational decisions. Berdie concluded from interviews that the parents of students who planned to go to college, perceived college in terms of other than economic values and thus implied goals that could be achieved only through the avenue of college. The assumption of a narrow equivalence between educational and vocational choice within a purely economic context does not appear tenable in all instances.

Interests

Studies of interest have more generally been associated with occupational rather than directly with educational choice. It is well known, for example, that interest patterns of male and female students differ in accordance with expected sex roles in the American culture at various stages of development (Strong, 1943; Carter, 1944; Tyler, 1955); are closely associated in complex ways with family influences and with occupational choice and persistence; and are a function of, but relatively independent of ability, school or work experience and other environmental and intrinsic individual conditions (Fryer, 1931; Berdie, 1944). Standardized interest inventories such as the Kuder and Strong have repeatedly been found to discriminate between educational program or curriculum groupings and are often used in the counseling of educational as well as vocational choice.

Values

Closely linked with interests, values play a prominent role in occupational choice and are considered to be a function of sex affiliation, parental influence, developmental stage and socio-economic factors (Dukes, 1955; Kuhlen, 1952; Miller and Form, 1951; Shartle, 1959; and Super, 1957). After analyzing essays written by 12 to 14 and 10 to 11 year old boys and girls from a lower and an upper class school, Galler (1951) concluded that social class was at least as important as chronological age. The upper class children gave significantly more intrinsic and altruistic reasons for choosing their occupational goals. Fleege (1946) found that interest in the work was the most frequent value in themes written by children aged 11 to 19 on their preferred occupation. Girls more frequently than boys wanted to help mankind. Havighurst and Taba (1949) applied a scale of moral values to 78 themes by 16 year old children on "The Person I would Like to be Like" and found significant though low correlations with social class (0.27) and social reputation (0.42).

Anderson and Dipboye (1959) studied the occupational values of 1181 high school pupils. Interesting work was ranked highest of nine items, especially by college bound pupils. These investigators noted a high degree of homogeneity in the values which relate to work. In Pace's follow-up of Minnesota graduates (1941) both male and female alumni placed greatest satisfaction on "a happy married life" although "financial security for your old age" and "comfortable and pleasant standard of living" were among the top 5 of 26 life satisfactions.

Studies of the occupational values of college students have recently been published by a group of sociologists at Cornell (Goldsen, Rosenberg, Williams, & Suchman, 1960; Rosenberg, 1958). Among their findings other-directedness was linked to interpersonal fields; achievement-oriented students stressed reward values and minimized creativity and women were less career oriented than men.

Two large sample surveys (Remmers, 1957; Langston, 1951) have suggested that security is the most popular value influencing occupational preference. Considerations of high pay, variety, and work with people ranked in the top six reasons for both polls. The Purdue group (Remmers, 1957) attempted to take a stratified sample of 2,000 10th, 11th and 12th grade students representative of the nation. Langston's population (1951) included a 5 percent cross-section of all 6th, 9th and 12th graders and college sophomores in Oregon. The Purdue Opinion panel asked for a rating of 16 characteristics of a job; the Oregon study required respondents to select important reasons for desiring a job from among 20 possibilities. Satisfaction was not included in either list. In contrast, University of Washington graduating male seniors in five different job preference fields (Dickinson, 1954), rated type of work, that is, "work which is interesting and liked by employee," higher than the job factors of advancement, human relations, salary and job security, working conditions, and benefits. When Miller (1954) compared 196 college men, ranging in age from 17 through 30, on the Occupational Values Indicator, he also found that career satisfaction was more important than social rewards, security, and prestige in all age groups.

Consideration of the large number of studies of factors determining choices of specific pre-vocational educational specialties and occupations support the generalization that certain values, like interests, are associated with specific choices. Thus Dukes (1955) has reviewed studies of the Allport-Vernon indicating consistent differential patterns for various preference groups. Along with an interest in children, the opportunity to help society is frequently reported as a major determinant of teaching (Johnson, 1958; Fielstra, 1955; Best, 1948; Orton, 1948). Bentley and Hemp (1958a, b, c) reported that agriculture seniors and freshmen at Purdue and Illinois ranked the following highest of 16 "opportunity factors:" "to use your own ideas; to do good for others; to earn money; to be your own boss; and for continuous employment."

Goldsen et al (1960) reported that students from 11 colleges who rated as highly important the "chance to earn a great deal of money" more frequently expected to enter food, restaurant, and hotel; business, real estate, finance; or advertising, public relations and journalism; "creativity" was associated with artistic and related fields, architecture, and advertising, public relations and journalism. O'Dowd and Beardslee (1960) applied the semantic differential to measure college student images of a group of professions and occupations. They considered this an excellent device for examining self-interest values. In sum, even within a given field considerations of sex, years of experience, socioeconomic factors, geographic location, and trend appear to be associated with values.

So far as this investigator can determine, research studies in which general values are treated as determinants of educational choice are scarce. An exception is the decision to attend college which has been the subject of several national and state surveys. Several of the Harvard Studies of Career Development were concerned with multivariate techniques in predicting the election of a curriculum in secondary school, but did not include measures of value. The Harvard group (O'Hara and Tiedeman, 1958; O'Hara, 1959) also have investigated and hypothesized about the work values of children. Likewise, other students of values in career choice (Ginzberg, Ginsburg, Axelrad, and Herma, 1951; Hawkes, 1952; Super and Overstreet, 1960) have not treated values as the direct determinants of educational choice. In one report Tiedeman, O'Hara and Matthews (1958) commented on the absence of studies on the flow of course and position choices.

Preparation for a vocation has been most frequently cited as the reason for attending college. Seventy-seven percent of Washington high school seniors (Slocum, 1958), and 80 percent of Minnesota senior boys (Berdie, 1954) cited this factor. Of a nation-wide sample of 17,141 boys (Educational Testing Service, 1957), 11,043 indicated their most important reason for attending college as did 13,707 of 18,293 girls. Of those responding, 38 percent of boys and 28 percent of girls checked "need the degree for work;" 21 percent of boys and 16 percent of girls "need to improve earning power;" and 13 percent of boys and of girls "need to explore fields of work."

When Jervis and Congdon (1958) asked University of New Hampshire freshmen and seniors to rank nine objectives of college education, vocational preparation preceded self-fulfillment and self-understanding in importance. Iffert's (1957) national survey of 12,007 college seniors indicated that the importance of reasons for going to college was associated with sex, academic class status, and type of institutional control. Thus, of all groups, men from public colleges rated occupational reasons highest; women from private independent colleges rated academic reasons highest. In their investigation of the decision to attend graudate or professional school Gropper and Fitzpatrick (1959) found that, of 3,038 graduate and professional students and upper classmen, in retrospect only 15 percent cited vocational considerations as leading up to their decision to attend college. The most popular responses were home and social environmental influences (27 percent) and long held assumption (24 percent). In contrast, half the group cited vocational considerations as leading to the decision to go to graduate or professional school. In choosing a particular field the influence of people and experiences (41 percent) and educational considerations (27 percent) were most frequently mentioned by 2,037 graduate and professional students.

In the past five years scholars have supplied considerable ammunition for critics of American youth. It is fashionable to view with alarm the deteriorating "values" of the modern adolescent. Thus, Jacob (1957) after reviewing the literature claimed that with few exceptions modern students, unchanged by the college experience, prized flexibility, sociability, tolerance and security. Wise (1958) has made the points that the reasons for college attendance at mid-century are new and different and that the socio-economic characteristics of the American student population are changing.

In general these studies may be criticized on a variety of methodological counts.

1. Except for Jervis and Congdon (1958), reliabilities of the instruments were not reported.

2. Questions on reasons seemed often to be incidental to other survey objectives.

3. Items apparently were not generally pretested through open-end and interview procedures and, therefore, were perhaps not at all representative of true subject attitudes.

4. The use of a forced single response to a list of 10 or 12 options may have oversimplified and concealed multi-causal and complex reasons for choices.

5. Some studies failed to treat males and females separately.

6. Several studies combined in one item a miscellany of determinants.

7. The investigators generally assumed subject cooperation and willingness to provide an honest, insightful answer.

External Influences

As a matter of convenience we have chosen to consider as a separate class of psychological determinants the reported influence upon educational choice of various persons and experiences. We feel it is desirable to distinguish psychological from sociological lines of evidence. Thus, in contrast to the sociological finding that males in six cities tended to enter the occupational level of their fathers (Jensen and Kirchner, 1955), is the psychological line of evidence that agriculture college students at Purdue and Illinois most frequently checked father (Bentley and Hemp, 1958a) as influencing their choice of a field of specialization. However, it is of course obvious that both sociological and psychological determinants interact with one another.

Like interests and values, more attention has been given to external influence upon occupational choice than upon educational choice. Roe (1956, p. 257) in summarizing studies of reported influences upon vocational choice has pointed to the following in order of importance: 1) parents; 2) other relatives; 3) friends or other students; 4) teachers; 5) people in the vocation; 6) books or magazines; 7) abilities; 8) school subjects; 9) tried and liked; and 10) best school marks. Influences themselves appear to vary depending upon ability, age, sex, social class, maturity, work experience, economic conditions, value orientations, place of residence and available opportunities -- that is the frame of reference of the individual. (See, for example, Cunliffe, 1929; Dyer, 1932; Endicott, 1931; Peters, 1941; Ritchie, 1930; Super, 1957 and Youmans, 1954.)

The Bentley and Hemp (1958a, 1958b, 1958c, 1959) study of agricultural students, Norton's (1953a, 1953b) comparison of factory workers and teachers, and the studies of choice of teaching (e.g. Willcox and Beigel, 1953; Fielstra, 1955) suggest that influences vary from one specialization to another. Apparently quite frequently teaching is selected because of an "inspiring" model, but failure to control sociological and psychological determinants makes it difficult to evaluate this factor.

There are few systematic investigations of reported external influences upon educational choice. The common sense observation that many young people elect to attend college because of parental influence has been confirmed by the self report of high school seniors in Washington (Slocum, 1958), Wisconsin (Little, 1958), and Minnesota (Berdie, 1954) and of upperclass students in 35 colleges (Gropper and Fitzpatrick, 1959) but on the average was of "slight influence" in a nation-wide survey of college seniors (Iffert, 1957). Kahl's (1953) interviews with 24 "common man boys" in their homes and Strodtbeck's (McClelland, et al, 1958) intensive investigation of achievement motivation in Jewish and Italian families serve as reminders of the complexity of the family dynamics behind educational decision making.

Despite unrepresentative sampling, the forcing of but one response to 13 determinants of various logical kinds, and possible ambiguity in wording, Gropper and Fitzpatrick's (1959) study previously cited, emphasized that influences vary with the nature of decision. Home and social environment, checked by 27 percent, was considered the most important influence retrospectively leading up to the decision to go to college, but played much less part in the decision to go to graduate or professional school (5 percent) or to enter a particular field (9 percent). Faculty and school experiences (6 percent) were much less influential than vocational considerations (50 percent) in deciding to attend graduate or professional school, but were most frequently cited (24 percent) as leading up to the election of a field of specialization.

We conclude from this selective review of the literature on the psychological and sociological determinants of educational and vocational choice that there appear to be a multitude of determinants and that they may vary with position choices available. Except for the decision to attend college, far less seems to be known about educational choice than vocational choice. A systematic, descriptive study, we reasoned, in which large samples of student populations at several educational levels were drawn from within an entire state, might help to clarify an important but relatively unexplored area and lay the foundation for further investigations both in Hawaii and nationally.

Theoretical Framework

Providing they do not bind or blind, theories are essential to scientific investigations; they should, of course, be considered as generalizations to date from previous studies, highly tentative and subject to revision as new evidence accumulates. It is important to make explicit at the beginning the major assumptions behind the design and execution of this study.

If information is scant, one desired outcome is the development of new leads for investigation. One purpose of this research was to identify and describe some of the major variables in the educational choice process and to suggest relationships between them for experimental verification in later studies. Moreover, this did not preclude the possibility that important variables and relationships exist which were not considered.

It was assumed first of all that an educational choice is a highly complex act made by a person in a given situation. Its determinants are multiple; these determinants may vary in kind and intensity from one person to another. Persons may vary in their insight into their own behavior. Choice may be a function of hidden or explicit motives.

Among various competing conceptualizations of personality organization Allport's construction (Lindzey, 1958) of psychological variables in motivation was preferred. Both the idiographic and nomothetic are essential for understanding the behavior of persons.

It was assumed also that those variables which describe the situation within which the person is responding contribute to the determination of his choices. Each person varies in his family affiliation, social stratum, institutional memberships, economic resources and in the roles and expectations which are in part a product of their interaction upon him. It was assumed further that personal characteristics -- sex, physical and intellectual attributes, and developmental level -- might interact with other psychological and sociological variables.

It was assumed, finally, that an individual's written or oral expression of his proposed educational choice and of his reasons for that choice might vary in honesty, clarity, fidelity, stability, and accuracy. Self reports were the primary data of this study. Behavioral scientists who refer to values, attitudes, wishes, motives, interests and other terms derived from such subject self-descriptions are inferring -- they are building hypothetical constructs from symbols. This in itself is not scientifically sinful unless such mediating variables are reified or unless epistemology is ignored in methodological designs and interpretations. The material of this study was considered to represent sets and attitudes which are more transient and unstable than basic motivational processes (Vinacke, 1961).

Occupational Choice

The recent work of Super, Crites, Hummel, Moser, Overstreet & Warnath (1957), Roe (1946a, 1946b; 1951; 1953), and of Ginzberg et al (1951) has called attention to the process of occupational choice within a developmental framework. In this investigation occupational and educational choices were treated as distinct though interrelated variables. It was assumed that in some situations they overlapped and that in others they were independent. The selection of certain specializations in college or professional school, e.g., engineering or education, can be considered a prevocational choice -- the selection of a position leading to a very clear vocational goal.

On the other hand, many college students and more faculty (Jervis and Congdon, 1958) consider the true liberal arts major, the undergraduate specialist in English literature for instance, as pursuing an intellectual end in itself, untainted by vocational considerations.

However, it was helpful to look to the productive work in this area as one important primary source in developing a theoretical base of operations and methodology. Tiedeman and his students (1958) have emphasized the flow or sequence of positions. Also, for example, Norton's penetrating critique of methodology (1953b) in the study of occupational choice seemed highly applicable. Furthermore, from Super's career pattern studies (Super and Overstreet, 1960) came fruitful conceptions of self-actualization in the stages of career development which may generalize to educational development.

Procedural Assumptions

Given this theoretical framework, a multiple approach to methodology seems mandatory eventually. The present survey study should then be considered as a beginning rather than a definitive report. As an exploratory tool, each questionnaire was developed to answer three broad questions:

1. What sorts of choices did Hawaii students make at the levels sampled?
2. Why did these individuals say they made their choices?
3. What were some of the socio-economic characteristics of the students sampled?

Which Educational Choices?

In selecting among possible educational choices for investigation, emphasis was placed on chronological distance and importance. Thus, choices were selected for study which were closest to the students, which the students had already made or would shortly have to make, and which had differential consequences of significance to the development of the students. At this point more attention was placed on selection of programs, plans or colleges within a university than on continuance or on preference for specific types of institution.

These considerations determined the selection of experimental populations. The 6th grade was selected as the minimum at which the majority of children would be able to understand the questions and as the year preceding the transition from elementary school to intermediate school in Hawaii. The 9th grade was sampled because these pupils were faced with the choice between five programs when they entered secondary school the next year. The 12th grade foreshadowed, of course, an important choice point -- after high school, what? In his freshman year at the University of Hawaii the student must select among one of six colleges. The university senior year represented a retrospective view of curricular choice by those who were finishing college. The adult evening program provided, in contrast, a sample differing greatly in the type of educational choice as well as in personal attributes.

Only about 300 University of Hawaii seniors each year continue to professional or graduate school, most of them in education. For instance, approximately one third of the 626 seniors in 1959 elected to continue in the fifth year of teacher preparation, a choice in many cases made in the freshman year. It therefore seemed logical to omit intensive consideration with present instruments of the reasons for post-graduate study.

In the 6th grade because of increased cost factors in opinionaire administration, final sample size was 23 percent of registered pupils in the state. Otherwise, 75 percent or more were sampled of the total population at each educational level.

Instruments

It was realized that descriptive questionnaire studies may be criticized for failing to measure in depth and complexity or to sample important determinants.

Recent more sophisticated studies on psychological determinants such as those of Ginzburg et al (1951); Roe (1946a, 1946b, 1951, 1953); Super et al (1957, 1960) and Tiedeman and his students (1958) remind us again of the tentative framework within which values should probably be considered. Values as a subclassification of attitude were assumed to be a function of more basic psychological processes interacting with complex environmental factors throughout human development. It was considered desirable to use a variety of instruments to supplement questionnaires.

Each survey was preceded by pilot questionnaires, individual interviews and conferences; at the 6th, 9th, 12th, and university freshman levels each was followed by readministrations to study stability in small samples. Open end techniques were used with senior samples and essays with 6th graders before developing the questionnaire. Because of its simplicity the check list was selected as the basic measuring technique. By starting with large populations and a crude measuring instrument, it was hoped first to obtain a rough outline of the most obvious major answers to the three basic questions at each level. Based on analysis of open end materials and review of the literature, the check lists were arbitrarily divided into the three classifications: general values, interests, and external influences. The development of instruments will be described in Chapter II.

It is important to emphasize here that the classification of these self report determinants and their eventual incorporation into a consistent miniature system is another possible potential outcome of this type of investigation. The counselors and psychologists who work with educational and vocational planning have relied heavily on the assumption that interest was crucial to vocational choice. The work of Strong, Tyler, Super, and Carter among others is so well known that further comment seems unnecessary. As has been shown, much less is understood about external influence or about general value. Since it was of major importance in the conception of the present study, value will be examined in some detail in the following section.

Value

Value is a central concept in human behavior. The quantity and variety of literature on value as well as its interdisciplinary character, is suggested by a recently published selected bibliography (Albert and Kluckhohn, 1959). Almost 2,000 references are classified from anthropology, psychology, sociology, political science, economics, philosophy, plus related sources.

If one asks a respondent his reasons for a specific choice, he may say that he likes the object or activity involved or that his friends are doing it or that his parents told him to do it and so forth. Also he may say that he thinks it will make him more successful or that it will make him more secure. In the investigation of the reasons for educational choice, such broad general statements were separated for analytical purposes and called "general values." Value then is a tentative working label placed on a set of statements which appear to have something in common.

In his extremely penetrating analysis of value orientations in American society, the sociologist Williams has said: (1951, p. 374)

> "It is essential for this analysis that we secure a clear conception of what values are and of how we may recognize and analyze their role in a system of motivated social action. We are concerned with values as observable variables in human conduct, not with our appraisal of various values as being better or worse than others, nor with the meaning and ontological status of value as a concept, however important these problems may be . . .
>
> "We will begin by regarding value as any aspect of a situation, event or object that is invested with a preferential interest as being 'good,' 'bad,' 'desirable' and the like . . ."

After pointing out that values in America do not fall into a consistent and integrated system, and that they are diverse and often inconsistent, Williams nominated achievement and success, activity, moral orientation, humanitarian mores, efficiency and practicality, progress and material comfort, equality, freedom, external conformity, science and secular rationality, nationalism-patriotism, democracy, individual personality, and racism as major value orientations. Some of these value orientations can be inferred from reasons given for educational choice, although of course they are not the only reasons nor are all these value orientations relevant.

From a psychological point of view earlier in this chapter values were defined as referring to the importance or worth which the individual may place on a person, object or construct (English and English, 1958). Values are included with such terms as purpose, goal, interest, and sentiment as examples of attitudes at the regulation level within the motivational system (Vinacke, 1961). Although some investigators of occupational choice have classified a reason offered for a course of action as "motive" (Norton, 1953a), the term "value" was preferable since connotations are avoided of need cycle or of other personality dynamics which are difficult to test. Inferences about deeper levels -- instigation and general metabolism -- are neither necessary nor justified. Value has discrete special meanings (Albert & Kluckhohn, 1959) as used by the economist, philosopher, theologian, mathematician, and others. As employed in this report values will refer operationally to one of the three sets of check list statements in the questionnaires. Logically earlier the three kinds of self-descriptive psychological determinant were distinguished -- the external influence of persons or experience, an interest in some specific activity, and general values. Factor analysis may well eventually justify a revision in this descriptive scheme.

The Problem of Educational Choice

To summarize, educational decisions are made by individuals in social contexts. When asked why he has made or will make specific decision, each individual's responses may be classed as representing interests, general values, and external influences. Such responses when obtained from inventories are considered sets and attitudes. Reported values and interests may be a relatively unstable product of the deeper levels of motivational structure and perhaps can be fitted into general personality theory. Reported influences may reflect those perceived pressures which the subject is willing or able to admit and presumably they are highly sensitive to the social context. Available educational choices vary in character as the individual mounts the educational ladder; previous decisions lead to consequent positions which determine options. Educational positions make possible training experiences which vary in the scope and quality of their utility. Hence, the individual or those influential upon him may consciously or unconsciously consider an educational position as implementing occupational entry, self-actualization, social mobility, and so on.

It is hypothesized that educational choice making is a complex process in which values play a central role, as well as interests, influences, demographic attributes and occupational goals. To predict, control and understand reasonably well the specific choice behaviors of a single individual we need also to know a wealth of idiographic information, for example, his self-concept, role expectations, experiential background and unconscious needs. The present study is concerned with large, diverse groups rather than single individuals. However, if the educational decisions of students in Hawaii can be described nomothetically; if continuities of sociological and psychological determinants at several educational levels can be identified; and if relationships between determinants and programs can be shown, then fruitful suggestions may be offered to those concerned with individual students.

Within the limits set by theoretical framework and methodologies, the research problem then may be summarized in the following questions about six educational levels in Hawaii.

1. What are some of the personal and socio-economic attributes of students?

2. What are some of their educational and occupational objectives?

3. What reasons do they give for electing proximate and broad educational programs?

4. What is the function of sex role in educational-vocational choice?

5. Which determinants are continuous across educational levels?

6. To what extent are sociological and psychological determinants and vocational aspirations associated with broad educational-vocational positions? What part do values play in educational choice?

7. What are the significant and salient patterns of determinant items and educational program preferences?

CHAPTER II

PROCEDURES

In this chapter the six major surveys upon which this study is based will be described after formulating the overall experimental design. For each survey, the development and administration of the instrument and sampling of the study population will be briefly summarized; evidence of the stability of the survey instrument will be presented. A more detailed description of the surveys is given in six supplementary reports (Dole and Iwakami, 1961a, 1961b; Dole and Iwakami, 1960a; Dole and Will, 1959; Iwakami and Dole, 1961; and LeVine, Dole and Iwakami, 1961).

Experimental Design

Derivation of check lists

The basic format of a check list approach to educational choice determination was derived after consideration of the relevant literature and analysis and categorization of written replies by University of Hawaii seniors to an open end question (Dole, 1957), "What led you to select the major or curriculum you have been following in college?" Three check list groupings were then constructed, using typical student phrasings. The logical justification for the groupings into general values, external influences and specific interests was presented in Chapter I. However, it should be noted that independent classification of the students' written statements by two of the experimenters preceded systematic consideration of other evidence, eternal to this investigation. A priori judgments were avoided in selecting items for inclusion. These basic check lists were then applied in preliminary studies to university seniors (Dole and Will, 1958), and entering freshmen (Will and Dole, 1959), as well as to 1958 secondary school seniors. Before adoption in the five survey instruments used in this research the items measuring personal and social attributes, educational and vocational objectives, and certainty, as well as those included in the check lists, were analyzed for suitability through semi-structured individual and group interviews, retesting of small groups or replication in successive years on similar educational level populations.

Treatment categories

In analyzing the data obtained from the six surveys we treated as independent categories vocational goals, selected personal and socio-economic attributes reported by the respondents (sociological determinants), certainty of educational plan, and reported general values, external influences and interests (psychological determinants). We treated as dependent categories broad and proximate educational programs. Within the limits set by the diverse nature of the six populations sampled, we attempted to keep the independent categories constant at each of the educational levels. On the other hand, the dependent categories necessarily differed at different levels. Because it is well known that male and female groups sampled from the same level make dissimilar educational and vocational choice and because in a preliminary paper (Dole and Iwakami, 1960b) it was shown that diverse male and female populations in Hawaii differed consistently in the proportions responding to many of the determinants, males and females were treated separately in analyzing psychological determinants.

Comprehensive Questions

Each of the surveys included questions which were presented in some form to all respondents as well as questions specific to the particular educational level. Many of these specific questions, which have been treated in the supplementary reports, will not be considered here. Each respondent was asked his national-ethnic background and, except for the adult students, his generation in the United States, the occupation of his father, his own occupational goal and the certainty with which he selected a proximate educational plan.

Table 1

Educational Levels Sampled
as Percent of Enrollment

Educational Level	Males	Females	Total	Total as Percent of Enrollment
Sixth grade public	1322	1255	2577	23%
Ninth grade public	3822	3805	7627	81
Twelfth grade public and private	3356	3155	6511	82
U. Hawaii freshman	806	790	1596	80
U. Hawaii senior	336	354	690	76
Adult (Oahu)	1243	2566	3809	79
Total	10,885	11,925	22,810	62

Thirty-five check list items on the general values, external influences and interests determining a broad educational-vocational preference were included in all six surveys. As explained in the next section, instructions and items were modified to fit the circumstances at each educational level.

Sample Populations

This study was concerned with 10,083 male students in Hawaii and 11,925 females. Table 1 shows the number of males and females sampled in each of the six surveys. Except for the adult group in which there were twice as many females as males there were no substantial differences between the sexes in per cent sampled. In five of the six educational levels sampled the total number of respondents exceeded 75 percent of the available figures listed as enrolled by the educational institution. Since the official enrollment figures did not take into account absences, withdrawals and other miscellaneous peculiarities at the time of the administration of the samples, the populations were probably representative of the student bodies in attendance except for the 6th grade.

Six Surveys

6th Grade

For the 6th and 9th graders we developed an inventory entitled, *What I Want to Do*. The final form of this inventory[1] was prepared after analysis of themes, sentence completions and preliminary forms. So far as possible the content of the items first used with college students was retained but the language was simplified. Individual and group interviews with pupils and with teachers and administrators confirmed clarity, readability, and appropriateness.

Assignment of respondents to the dependent categories was based on their answers to the following question: "When you go to high school you will have to choose from one of the five kinds of study programs listed below in the boxes.

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[1] Copies of instruments used in each survey will be found in Appendix III.

Table 2

High School Program Choice of 6th and 9th Grade Pupils by Sex
(Percentages)

Program	Boys 6th Grade	Boys 9th Grade	Girls 6th Grade	Girls 9th Grade
College preparatory (scientific)	31	26	13	15
College preparatory (general)	22	17	36	32
Technical	23	38	13	7
Business occupations	11	7	28	36
Terminal	13	11	10	9
No answer	--	1	--	1
Total	100	100	100	100
Number of respondents =	1322	3822	1255	3803

Which ONE of the five study programs would you like to take in high school?" The pupils were asked to check items determining "the study program you want in high school."

What I Want to Do was administered either by one of the project assistants with a regular teacher present or by classroom teachers under the supervision of student personnel coordinators in each state district. The administrators followed specific directions and completed a report form. According to these report forms, the respondents appeared cooperative, interested, and seemed to understand what was expected of them, except for a small minority of non-readers. The completed answer sheets were audited, punched on IBM cards, and tabulated by the IBM office of the Department of Education.

School participation in the survey, unlike the others in the series, was completely voluntary. The 6th grades of 40 schools, 25 percent of all elementary public schools in Hawaii returned 2577 usable answer sheets. Because of the permissive nature of selecting schools, the sample population cannot be considered representative of all children in the Hawaii public schools at the 6th grade level. To control possible administrative and sampling variables, for certain analyses in this study the 6th grade sample was separated into two sub-populations. The high school program choices of the 6th and 9th grade boys and girls are shown in Table 2.

As described in fuller detail in the supplementary report, What I Want to Do was readministered after one week to 29 students at the Lanakila school, a reasonably typical 6th grade class. The instrument was felt to be sufficiently stable to justify a comparison between groups. For example, rank order of correlation between first and second administration was for influence items 0.77, for value items 0.75, and for interest items 0.94, all significant at the .01 level.

Of the 42 check list items, all but 2 exceeded 70 percent consistency between first and second administration.[1]

9th Grade

A trial administration at Stevenson Intermediate School established that *What I Want to Do* was appropriate also for 9th grade populations. After inspecting the results of the trial administration, interviews with pupils and conferences with teachers and administrators, the project team felt confident that teachers could administer *What I Want to Do* to their classes, and that most of the children would understand the questions. Accordingly, copies of *What I Want to Do* and answer sheets with instructions for administration were distributed to testing coordinators throughout the state during spring, 1960. A letter of transmittal explaining the purposes of the study and form for reactions to the survey and for reporting any unusual difficulties in administration were enclosed with the packets for each teacher. Inspection of report forms revealed in general that administration was effected without difficulty, that the pupils were observed to respond cooperatively and enthusiastically, except for a minority with reading problems, and that the teachers were interested in the outcome.

Of 58 ninth grade schools in Hawaii, 86 percent returned the completed questionnaires. In each of the five major public school districts of the state, the number of respondents exceeded 75 percent of the number enrolled, according to statistics of the Office of Research and Statistics, Department of Education

What I Want to Do was readministered to 31 students in a class at Leilehua Intermediate School after an interval of one week. The responses were found to be sufficiently constant to justify comparisons between groups for the check list

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[1] A fuller treatment of stability will be found in the supplementary studies and in Appendix I.

Table 3

Next Plans of High School Seniors by Sex
(Percentages)

Plan Categories	Males	Females
Continue full-time school	50	68
Permanent civilian employment	11	17
Military service	22	2
Apprenticeship	14	5
Other	3	8
Total	100	100
Number of respondents =	3356	3155

items. The rank order correlation between first and second administrations was 0.86 in the case of influence items, 0.95 in the case of value items, and 0.94 in the case of interest items, all significant. All but 7 of the 42 check list items exceeded 70 percent in consistency.

12th Grade

Each spring since 1952 the Joint Committee on Guidance and Employment of Youth has sponsored a survey of the plans and aspirations of Hawaii's public and private high school graduates. Among the items used in the 1960 questionnaire were several adapted for this study. In a section entitled, "Reasons for Present Plans" the same check list items included in *What I Want to Do* were presented with the following instructions: "Which of the following played the greatest part in deciding your next plans (school, work, military service, etc.) after high school? You may mark X on more than one on your *answer sheet*."

As indicated in Table 3, the 6,511 respondents were classified into five plan groupings. It should be noted that, unlike the other categorizations of the dependent variable, the assignment to a plan was based in part on a later judgment by the experimenters since some respondents indicated more than one plan. (See Dole and Iwakami,1961b for the rationale of this procedure). Also, the plans included not only the broad choice of further education, but options of work, military service, apprenticeship, and other.

During April, 1960, the questionnaires were circulated to the schools through the Office of Research and Statistics. A set of directions for administration and the report form were directed to the testing coordinator at each school. Each returned answer sheet was audited. Before printing the final form, a pilot administration followed by a group conference with 27 seniors at the University High School had provided assurance that the inventory was understandable. Analysis of written reports by the cooperating high schools after adminis-

Table 4

College of University Freshmen and Seniors by Sex
(Percentages)

College	Males		Females	
	Freshmen	Seniors	Freshmen	Seniors
Arts & Sciences	46	28	34	19
Applied Science	--	29	--	12
Nursing	1	--	7	--
Engineering	26	--	2	--
Agriculture	3	3	3	5
Business Administration	17	28	6	6
Education	7	12	48	58
Total	100	100	100	100
Number of respondents =	806	336	790	354

tration to the total sample group indicated that in general the form was usable, although a few seniors found it cumbersome and confusing. Forty-five secondary schools participated in the survey, 90 percent of all public and private secondary schools in Hawaii. The number of respondents in each of the five public school districts and in the private school group exceeded 75 percent of the number listed as enrolled by official sources. It is believed that in general the population sample can be considered as representative of all 1960 private and public secondary school seniors in Hawaii.

The survey of high school graduates was tested for stability by readministering the instrument after a week interval to 106 seniors registered at Waialua and Castle High Schools. The rank order correlation of influence determinant items was 0.91 between first and second administrations; for value items 0.89; and for interest items 0.90, all significant. Of 42 check list items, all but one exceeded 70 percent in its consistency.

Freshmen

The questionnaire which had been used with the 1958 freshman class at the University of Hawaii (Will and Dole, 1959) was modified slightly. The following question was used in introducing the check list items: "So far as you can tell, which of the following played the greatest part in your choice of a college (or curriculum, if you have already narrowed your choice)? (Mark X on one or more.)" Table 4 shows the college in which university freshmen, men and women, registered at the time that they completed the questionnaire. It should be noted that the explanatory sentence was omitted which was used after each check list item in the 6th, 9th, and 12th grade samples.

The questionnaires were administered and checked, item for item, on collection for accuracy as part of the fall 1959 orientation process. The 1596 usable replies were closely representative of the distribution by college as reported by the

University of Hawaii Records Office. Only 168 of the students had earned any college credits, none more than 21 credits, and all were classified as full time students. The median age was 17.9 for the men, and 17.8 for the women.

The survey of entering students was repeated one week after registration with 29 students in a required freshman composition class as subjects. If coefficients of stability are expressed in terms of the relationship between the rank orders of items on the first and second administrations, they were 0.83 for influences, 0.86 for values, and 0.86 for interests, all significant. For the 40 check list determinant items all but seven exceeded 80 percent in consistency.

University seniors

Since 1952 the University of Hawaii Office of Student Personnel has administered an inventory of senior plans in coordination with the secondary school survey sponsored by the Joint Committee on Guidance and Employment of Youth. The 1959 survey included the same check list items as those later used in the freshman survey, previously described. The following question was used: "As far as you can tell, which of the following played the greatest part in your choice of a major or curriculum (Mark X on one or more)?" Note that whereas the freshmen were asked about their choice of a college or curriculum which was being made concurrently, the seniors were asked about their choice of a major or curriculum which in most cases would have been made two or more years previously.

The questionnaires were administered and checked item by item for accuracy as a part of the spring 1959 registration process. Questionnaires were included in the registration packets of all students having senior standing in the university. Of the 690 seniors (76 percent of registered seniors) included in the sample, 626 or 90 percent of those on the Records' Office list of anticipated graduates, expected to complete their undergraduate work in 1959. For all colleges within the university the percent of June graduates replying exceeded 80 percent. After the senior

Table 5

Type of Class Activity of Adult Education Students by Sex (Percentages)

Type of Class Activity	Males	Females
Basic Elementary	22	32
Advanced Elementary	6	4
Secondary (Credit)	34	13
Secondary (Non-credit)	5	2
Homemaking and Parent	11	28
Civic Training	2	3
Naturalization	12	7
Cultural Opportunities	8	11
Total	100	100
Number of respondents =	1243	2566

survey was conducted (Table 4) and before the freshmen sampling, the Colleges of Nursing and Engineering were created and the College of Applied Science abolished.

Although the 1959 senior survey was not studied for test-retest stability, it was assumed that the instrument could be used with confidence in comparing groups. This assumption is based in part on stability studies of the 1960 instrument. The 1960 senior survey (Dole and Iwakami, 1960c) which has been treated as a supplementary study in this research project, asked many of the same questions, and was administered to a comparable educational level population. In addition, when the items were ranked in order of size of percentages for the 650 seniors surveyed in 1958, the correlation with the 1959 ranking was 0.94 for values, 0.93 for influences, and 0.95 for interests, all significant. For 40 items, the mean difference between the two years was less than two percent.

Adult

In the spring of 1960 the Adult Education Service of the Department of Public Instruction surveyed 16 public community schools for adults on the island of Oahu. LeVine, Dole and Iwakami (1961), after a pilot administration to a typical adult class, adapted the check list items to the study population, using the following questions: "Which of the following helped you to decide what you wanted to study (mark one or more)?"; "Why did you choose the kind of courses you have taken and are now taking (mark one or more)?" for general values, and "What are the kinds of things that you like and that helped you to choose the kind of courses that you wanted to take (mark one or more)? Work with:" Thus in effect the respondents were being asked to give the reasons as to why they were enrolled in a specific type of class activity, a choice which they had made a few weeks before the survey. The eight types of activity (Table 5) have been described in detail by LeVine, Dole and Iwakami (1961) and represent a logical grouping of various courses available in the community schools.

It should be noted that the adult group was selected in part because of its distinctive characteristics in comparison with the other survey populations. Thus, the types of activity ranged in formal educational level from grade one to twelve, included some courses meeting the needs of illiterates and others of college graduates and included some courses of a non-credit nature.

The questionnaire was administered during the middle of the second semester in March 1960 by the teachers of the various classes, under the general supervision of the principals of the 16 adult school centers then in operation in Oahu. Teachers and principals were given verbal and written instructions emphasizing that the responses were to be voluntary and as nearly anonymous as possible. (Note that this was the only survey in which anonymity was preserved). On the basis of the stability studies on other populations and the pilot interview, it was assumed that the instrument was sufficiently reliable to permit comparisons between groups of 50 or more.

Usable replies were received from 3809 students in 329 different adult education classes. Students enrolled in more than one class completed only one questionnaire. Considered as a percent of highest reported attendance, they represented a 90 percent return, 75 percent or more from each of the 16 high schools.

In sum, the total study population of 22,810, over 60 percent of official enrollment figures, represented six different educational levels in Hawaii. Five survey instruments were used, each adapted to the characteristics and proximate educational plans of the level sampled, but each including similar items to measure selected attributes and psychological determinants.

Chapter III

RESULTS

The findings of the six cross-sectional studies will be integrated in this chapter. Detailed summary presentations by sex for each item were presented in the six independent supplementary reports cited in the preceding chapter. In this chapter the educational levels sampled will first be described, treating males and females separately as appropriate, in terms of their socio-economic attributes, goals, and check list determinants, that is, the various independent categories. The extent of the relationships found between these independent categories and the educational plan or program groupings, treated as dependent categories, will then be summarized. In analyzing the data, computations of the percents responding to each item of each male and female population permitted comparisons across the six educational levels.

Socio-economic Attributes

National-ethnic origin

Six or more of every 10 respondents at all educational levels (Table 6) were of Oriental or Polynesian ancestry. Subjects of Japanese and of Caucasian origin were the most frequently reported. The populations had distinctive national-ethnic characteristics. There were proportionately more Caucasians in the 6th grade, and more Filipinos in the 6th, 9th, and 12th grades. In the university samples, there were higher proportions of Japanese and Chinese and lower proportions of mixed and Hawaiian groups.[1]

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[1] It should be noted that to some extent differences in sociological attributes between educational levels were a reflection of variations in classification and measurement techniques. Thus it was possible to audit the university students' replies individually to reduce unclassifiable responses. See supplementary reports for a fuller discussion of this problem and the related difficulties in comparing the study populations with available census figures.

Table 6

National-Ethnic Origin by Educational Level (Percentages)

National-ethnic origin	Sixth Grade	Ninth Grade	Twelfth Grade	University Freshmen	University Senior	Adult
Japanese	31	42	43	57	66	48
Caucasian	29	14	18	17	10	25
Filipino	13	13	13	3	2	8
Mixed	9	11	9	6	2	[a]
Chinese	3	5	7	13	15	10
Hawaiian	5	6	5	2	3	5
Korean	1	1	1	1	1	[a]
Other	6	6	3	1	1	4
Don't know	3	2	1	--	--	--
Total	100	100	100	100	100	100
Number of respondents =	2577	7627	6511	1596	690	3809

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[a] Reclassified by inspection

Table 7

Generation in the United States by Educational Level (Percentages)

Generation	Educational Level				
	Sixth Grade	Ninth Grade	Twelfth Grade	University Freshmen	University Senior
First or second	6	8	14	25	50
Third	14	26	32	58	27
Fourth or more	12	10	9	16	3
Don't know, can't say, and no answer.	68	56	45	1	20
Total	100	100	100	100	100
Number of respondents =	2577	7627	6511	1596	690

Table 8

Occupational Classification of Father by Educational Level (Percentages)

Father's Occupational Classification	Educational Level Sixth Grade	Ninth Grade	Twelfth Grade	University Freshman	University[a] Senior
Professional	5	5	6	15	7
Semi-professional	1	1	1	9	3
Managerial or official	6	8	12	26	28
Clerical or sales	7	6	7	11	13
Domestic, personal, or protective service	29	11	10	4	4
Skilled	20	30	32	22	21
Semi-skilled	8	12	10	6	8
Unskilled	6	8	8	6	11
Other	14	16	6	--	--
Don't know, no answer	4	3	8	1	5
Total	100	100	100	100	100
Number of respondents =	2577	7627	6511	1596	752

[a] 1960 Sample

Table 9

Plans after High School of Sixth and Ninth Grade Pupils by Sex (Percentages)

Plan	Boys		Girls	
	Sixth Grade	Ninth Grade	Sixth Grade	Ninth Grade
I want to quit school when I am 16 years old or before	3	1	1	1
I want to finish high school and go on to college right away.	50	37	68	51
I want to finish high school and then get a job right away.	12	12	17	16
I want to finish high school and then go to a technical or vocational school right away.	14	29	8	25
I want to finish high school and then enter the service as soon as I can.	17	19	3	5
I want to finish high school and then become a homemaker right away.	1	--	2	1
Did not answer	3	2	1	1
Total	100	100	100	100
Number of respondents =	1322	3822	1255	3805

Generation

In Table 7, generation in the United States is summarized for five of the educational levels. Many of the respondents, especially the younger ones, were unable to identify their generation. Six or more out of every 10 who did specify indicated that they were children or grandchildren of immigrants. The proportion of first and second generation individuals increased with level group.

Occupational classification of father

Although all occupational classifications were represented, the five educational levels from which information on father's occupation was collected differed from one another (Table 8). Fathers of the 6th grade group most frequently were reported to be in occupations classed as domestic, personal or protective service and of the 9th and 12th grade groups in skilled occupations. The university students reported more fathers at the upper occupational levels, but the university seniors also reported more unskilled fathers.

Goals

Educational plans

The trend in the five populations sampled was consistently to indicate a desire for more education. Thus, as shown in Table 9, almost two-thirds of the boys and three-quarters of the girls in the 6th and 9th grades, after finishing high school wanted either to go on to college right away or to attend a technical or vocational school right away. The 12th grade population (Table 3) showed the same pattern of preference. More than half of the university freshmen (Dole and Iwakami, 1960a) felt it was probable or very likely that they would continue to professional or graduate school after the bachelor's degree. Half of the university seniors (Dole and Will, 1959) expected to continue with more education within six months after graduation.

Table 10

Changes in Self-Concept Expected by Sixth and Ninth Grade Pupils (Percentages)

"How much do you think you will change in your ideas about what you will like to do 10 years from now?"	Boys		Girls	
	Sixth Grade	Ninth Grade	Sixth Grade	Ninth Grade
Very much	12	10	10	8
Somewhat	13	12	15	16
Very little	25	24	24	28
Not at all	6	4	6	4
Don't know and no answer	44	50	45	44
Total	100	100	100	100
Number of respondents =	1322	3822	1255	3805

Table 11

Occupational Goals of Males by Educational Level (Percentages)

Occupational Goal Classification	Educational Level Sixth Grade	Ninth Grade	Twelfth Grade	University Freshman	University Senior	Adult[a]
Professional	30	32	31	59	61	10
Semi-professional	25	12	5	3	3	--
Managerial or official	4	6	7	12	18	10
Clerical or sales	1	1	2	--	--	9
Domestic, personal, or protective service	22	12	6	1	1	20
Skilled	10	28	28	--	--	23
Semi-skilled	3	3	2	--	--	6
Unskilled	1	1	--	--	--	15
Unclassifiable	2	2	4	13	5	2
Don't know, no answer	2	3	15	12	12	5
Total	100	100	100	100	100	100
Number of respondents =	1322	3706	3356	806	336	1243

[a] Reported present occupation

Table 12

Occupational Goals of Females by Educational Level
(Percentages)

Occupational Goal Classification	Educational Level Sixth Grade	Ninth Grade	Twelfth Grade	University Freshman	University Senior	Adult[a]
Professional	42	43	39	75	84	9
Semi-professional	8	6	2	6	2	--
Managerial or official	2	1	2	1	4	3
Clerical or sales	18	25	28	--	--	13
Domestic, personal, or protective service	15	15	11	1	--	8
Skilled	1	1	1	--	--	5
Semi-skilled	--	--	--	--	--	1
Unskilled	1	1	--	--	--	2
Unclassifiable	2	2	5	6	2	1
Housewife	10	4	2	b	b	55
Don't know, no answer	1	2	10	11	8	3
Total	100	100	100	100	100	100
Number of respondents =	1255	3696	3155	790	354	2566

[a] Reported present occupation.

[b] Item not presented to University students.

Table 13

Certainty about Educational-Vocational Plans by Educational Level (Percentages)

	High School Program	High School Program	Post High School Plans	College Curriculum	Post College Plans
Certainty	Sixth Grade	Ninth Grade	Twelfth Grade	University Freshman	University Senior
Absolutely sure (at least 99% sure)	10	11	25	13	32
Very sure (at least 75% sure)	58	59	29	36	26
Fairly sure (at least 50% sure)	8	9	33	37	31
Not sure (at least 25% sure)	10	10	10	12	10
Completely unsure (only 1% sure)	14	10	1	2	1
No answer	--	1	2	--	--
Total	100	100	100	100	100
Number of respondents =	2577	7627	6511	1596	690

Occupational goals

Table 11 permits us to compare the occupational goals of the males when classified by status levels for each of the study populations. Table 12 summarizes the occupational goals of the females. The adult group was classified by present occupation. Professional goals were most popular in all but the adult group, but each group had a distinctive distribution.

Certainty

In looking forward to the next educational program choice open to them, the respondents in all but the adult group were asked how sure they felt (Table 13). Approximately 5 or more out of every 10 at all levels were absolutely or very sure. There were proportionately more 6th and 9th grade pupils at the extremes of the distribution. More university seniors expressed absolute confidence. The 6th and 9th grade pupils (Table 10) were also asked how much they thought they would change in their ideas in ten years about what they would like to do. Approximately 3 out of every 10 respondents thought they would change very little or not at all.

Check List Determinants

Of 49 check list items included in one or more of the five survey instruments, 35 were presented to all populations. In Tables 14-19 it is possible to compare the popularity of these selected value, influence, and interest determinants for males and females. (See Appendix III for copies of the survey instruments with full wordings of the items.)

Selected general values

The most popular general values at all levels for male respondents (Table 14) were satisfaction, checked by one or more of every four in the six populations; and advancement, and security, each checked by approximately one or more out of every five. Females (Table 15) also ranked satisfaction first, preferred by approximately one-third or more at the six levels; satisfaction was followed in popularity by

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Table 14

Selected General Values Contributing to the Educational Choices of Males by Educational Level

General Values	Sixth Grade (HS Prog.)	Ninth Grade (HS Prog.)	Twelfth Grade (Post HS Plan)	University Freshman (College)	University Senior (Curriculum)	Adult (Type of Class)	Mean Rank All Levels
Satisfaction	29%[a]	35%	45%	46%	57%	26%	1.8
Advancement	33	37	35	27	22	26	2.8
Security	21	24	27	35	26	19	5.3
Aptitude	22	30	41	28	24	5	5.8
Specialization	29	30	32	18	13	9	6.0
Self-improvement	25	22	25	16	17	42	6.2
Potential Income	21	22	24	30	26	17	6.3
Practicality	21	35	26	10	11	27	7.1
Independence	24	24	29	14	8	18	7.3
Serve others	25	17	18	19	15	14	7.5
Prestige	8	7	10	14	12	7	10.5
Other[b]	2	2	4	4	2	10	12.0
Easiness	6	7	6	1	1	2	12.3
Number of respondents =	1322	3822	3356	806	336	1243	

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[a] Totals of percentages exceed 100 since respondents could list more than one choice.

[b] Does not include total checking various value items which were not presented to all populations. See Appendix II, Table 33.

Table 15

Selected General Values Contributing to
Educational Choices of Females by Educational Level

General Values	Sixth Grade (HS Prog.)	Ninth Grade (HS Prog.)	Twelfth Grade (Post HS Plan)	University Freshman (College)	University Senior (Curriculum)	Adult (Type of Class)	Mean Rank All Levels
Satisfaction	32%[a]	42%	62%	62%	76%	39%	1.3
Serve others	35	33	38	40	34	12	3.3
Self-improvement	27	27	35	23	24	36	5.0
Practicality	23	37	29	14	18	34	5.2
Security	15	21	31	41	41	13	5.7
Independence	32	28	40	9	8	19	6.2
Aptitude	17	28	41	25	12	5	6.3
Advancement	30	31	27	16	11	12	6.3
Specialization	28	31	25	11	11	3	7.8
Potential income	15	13	15	13	8	7	9.6
Prestige	7	6	10	12	9	8	10.0
Other[b]	3	2	5	3	2	9	11.8
Easiness	7	5	5	1	-	2	12.5

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[a] Totals of percentages exceed 100 since respondents could list more than one choice.

[b] Does not include total checking value items which were not presented to all samples. See Appendix II, Table 33.

Table 16

Selected External Influences Upon the Educational Choices of Males by Educational Level

External Influences	Sixth Grade (HS Prog.)	Ninth Grade (HS Prog.)	Twelfth Grade (Post HS Plan)	University Freshman (College)	University Senior (Curriculum)	Adult (Type of Class)	Mean Rank All Levels
Experience	27%[a]	22%	21%	15%	21%	38%	3.0
Friends	19	27	27	16	18	15	3.0
School courses	19	21	28	31	20	9	3.3
Parents	39	36	26	25	13	4	3.7
Hobby	35	24	14	11	8	7	5.5
Teacher	13	18	14	28	9	8	6.0
Relatives	14	16	15	11	6	6	7.7
Co-curricular activities	23	18	11	5	4	4	8.3
Random choice	11	6	6	8	9	9	8.3
School counselor	2	7	16	13	4	4	8.5
Other[b]	2	4	6	8	8	11	8.7
Number of respondents =	1322	3822	3356	806	336	1243	

---

[a] Totals of percentages exceed 100 since respondents could list more than one choice.

[b] Does not include total checking various influence items which were not presented to all samples. See Appendix II, Table 33.

Table 17

Selected External Influences Upon the Educational Choices of Females by Educational Level

External Influences	Sixth Grade (HS Prog.)	Ninth Grade (HS Prog.)	Twelfth Grade (Post HS Plan)	University Freshman (College)	University Senior (Curriculum)	Adult (Type of Class)	Mean Rank All Levels
Parents	47%[a]	44%	35%	33%	28%	4%	2.5
Friends	27	34	30	17	23	20	2.7
Experience	21	17	25	23	25	17	3.8
School courses	22	24	36	25	19	3	4.3
Teacher	26	25	19	28	15	6	4.3
Relatives	20	22	22	13	10	8	6.1
Co-curricular activities	16	13	13	11	10	5	7.6
Other[b]	4	5	7	7	10	14	8.2
Hobby	11	8	7	8	7	10	8.5
School counselor	2	8	17	13	4	2	9.0
Random choice	11	7	3	5	5	12	9.0
Number of respondents =	1255	3805	3155	790	354	2566	

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[a] Totals of percentages exceed 100 since respondents could list more than one choice.

[b] Does not include total checking various influence items which were not presented to all samples. See Appendix II, Table 33.

Table 18

Selected Interests Contributing to
Educational Choices of Males by Educational Level

Interests	Sixth Grade (HS Prog.)	Ninth Grade (HS Prog.)	Twelfth Grade (Post HS Plan)	University Freshman (College)	University Senior (Curriculum)	Adult (Type of Class)	Mean Rank All Levels
Ideas	25%[a]	37%	43%	31%[c]	32%	34%	2.2
Science	43	30	17	37	34	8	2.6
Numbers	28	29	22	30	24	23	3.2
Machinery	43	51	40	15	11	8	3.3
Words	20	14	15	11	3	44	5.8
Adults	8	6	9	21	23	8	6.1
Growing things	22	17	6	8	7	7	7.0
Music	17	11	6	4	5	6	8.3
Children and youth	7	5	5	14	16	4	8.5
Other[b]	6	4	7	10	10	5	8.8
Food	8	6	4	1	1	3	10.2
Number of respondents =	1322	3822	3356	806	336	1243	

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[a] Totals of percentages exceed 100 since respondents could list more than one choice.

[b] Does not include total checking various interest items which were not presented to all samples. See Appendix II.

[c] References of 1958 University Freshman sample were used to determine this percentage.

Selected Interests Contributing to Educational Choices of Females by Educational Level

Interests	6th Grade (HS Prog.)	9th Grade (HS Prog.)	12th Grade (Post HS Plan)	University Freshman (College)	University Senior (Curriculum)	Adult (Type of Class)	Mean Rank All Levels
Children and youth	40%[a]	36%	34%	63%	68%	10%	2.1
Ideas	27	36	45	20[c]	21	27	2.8
Words	40	41	33	16	5	42	3.1
Numbers	33	26	17	11	8	10	5.0
Adults	10	12	14	22	24	8	5.5
Music	39	18	10	8	11	9	5.7
Science	15	13	12	16	12	1	6.7
Food	34	17	9	3	4	16	6.8
Other[b]	5	7	8	7	6	7	8.8
Growing things	12	8	3	6	4	6	9.3
Machinery	3	6	11	2	--	2	10.2
Number of respondents =	1255	3805	3155	790	354	2566	

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[a] Totals of percentages exceed 100 since respondents could list more than one choice.

[b] Does not include total checking various interest items which were not presented to all samples. See Appendix II, Table 33.

[c] Responses of 1958 University freshman samples were used to determine this percentage.

service to others, checked by one third or more of respondents in all groups except the adult; self-improvement, checked by one fifth or more; followed by practicality, which was popular except with the university samples.

External Influences

For the male respondents the most popular influences (Table 16) were experience and friends, followed by school courses and parents. None of these influences were consistently rated by one fifth or more in all six groups. The university seniors and the adults picked proportionately fewer influence items. In fact one fifth of the adult respondents did not check any external influence items. The popularity of parents and hobby declined with educational level, as did co-curricular activities.

Among female respondents (Table 17) parents were influential with over a quarter in each group except the adult. Friends was next in popularity, followed by experience. The percent checking parents and co-curricular activities declined with educational level.

Selected interests

For the males the most popular interest determining educational choice (Table 18) was working with ideas, checked by one quarter or more of the respondents in each group. Numbers, checked by one fifth or more, and machinery were also popular, as was science.

Among the females (Table 19) an interest in children and youth was preferred, checked by one third or more of respondents in all groups except the adults, followed by ideas, indicated by one fifth or more in all groups, and words.

Educational levels

For the three check lists, agreement among the six educational levels was measured by Kendall's coefficient of concordance (W) (Table 20). For the 11 value check list items used at all levels agreement by both males and females was fairly high and significant. For 11 external influences the agreement was moderately high

Table 20

Coefficients of Concordance (W) Between Educational Levels for Determinants by Sex

Determinants	Males	Females
General Values	0.64**	0.69**
External Influences	0.53**	0.51**
Interests	0.72**	0.66**

** Significant at .01 level.

Table 21

Rank Order Correlations Between Males and Females of Determinants by Educational Level (Percentages)

Educational Level	Determinants		
	Values	Interests	External Influences
Sixth Grade	0.71**	0.04	0.61*
Ninth Grade	0.83**	0.02	0.73**
Twelfth Grade	0.74**	0.46	0.90**
U. H. Freshman	0.84**	0.40	0.93**
U. H. Senior	0.74**	0.58	0.82**
Adult	0.86**	0.16	0.84**
Mean of ranks, all levels	0.53*	0.14	0.71**

*Significant at .05 level
**Significant at .01 level

and significant. For 13 interest items agreement was fairly high for both the males and females and significant. This is another way of reporting that many values, external influences, and interests appeared to extend a general effect across levels and choices.

Sex

When the check list items at each educational level were ranked in order of popularity by males and females for each of the three check list groupings, it was possible to compare values, interests, and external influences in terms of sex (Table 21). At all levels the value and external influence items showed a moderately high relationship between sexes. All the rank order correlations were statistically significant. There were no important differences between groups at the various educational levels. On the other hand, rank order correlation between males and females for interests did not attain significance at any of the educational level groups.

The rank order correlation between males and females for the mean of the ranks of the six educational levels permitted a summary figure of these relationships. On this basis, external influences were fairly similar (ρ=0.71) in their reported popularity with males and females, followed by values moderately high (ρ=0.53) in significance, and interests low positive but not significant (ρ=0.14).

In the supplementary reports differences between percentages of males responding to each item were tested against females for binomial confidence limits, using Mainland et al's tables (1956). (See also Dole and Iwakami, 1961b). The males consistently prized more highly opportunities for advancement, and potential income, were more interested in machinery, science, and growing things. The females put higher value on satisfaction, the chance to serve others, self-improvement, and practicality, were interested in work with children and youth, food and words, and reported more frequently they were influenced by friends, teachers, and parents.

Relationships to Educational Programs

In this section we will compare the relationships to educational programs of the various independent categories. To express the extent of association between two sets of categories (nominal scales) we selected the contingency coefficient (C). Because C cannot attain unity, it does not approach Pearson r in size unless the number of categories is large (Guilford, 1950, p. 344), at least five each way. Siegel (1956, p. 201) has pointed out that two contingency coefficients are not strictly comparable unless they are yielded by contingency tables of the same size.

At each level sampled each set of determinants was cross-tabulated against the educational choice available to the group. For each of the contingency tables thus obtained chi squares were computed for each cell and summed for each row and column. The salient and significant patterns of these relationships are summarized in the next chapter. For each table the total of chi squares permitted the determination of significance and the computation of C, expressing the extent of relationship between the two sets of categories (Siegel, 1956). Contingency coefficients were summarized for occupational goals, psychological determinants, sociological determinants, and certainty of choice.

Because the sixth grade sample was obtained on a permissive basis, because it was the least stable of the populations and because of marked differences in the socio-economic backgrounds of the respondents (Dole and Iwakami, 1961b), it was decided to split the sixth grade into two sub-populations. Sixth grade local was predominantly local in its characteristics and in general fairly similar to the other samples. Sixth grade military was taken from a single school district, Rural Oahu, and it included a majority of Caucasian military dependents. It was also felt

Table 22

Relationship (C) Between Sociological Determinants
and Educational Choices by Educational Levels

	Attributes								
	National-Ethnic			Generation			Father's Occupation		
Educational Level	M		F	M		F	M		F
6th grade, local	0.28**	(20)[a]	0.26*	0.15	(12)	0.14	0.26	(24)	0.29*
6th grade, military	0.21*	(32)	0.28**	0.16	(12)	0.24**	0.27**	(24)	0.32**
9th grade	0.33**	(32)	0.34**	0.26**	(16)	0.27**	0.23**	(28)	0.23**
12th grade	0.25**	(32)	0.35**	0.22**	(16)	0.25**	0.24**	(24)	0.24**
University freshman	0.20**	(16)	0.35**	0.19*	(16)	0.28**	0.22*	(28)	0.26**
University senior 1959	0.28**	(30)	0.29**	0.17	(12)	0.18	0.24	(16)	0.25
Median	0.27	(31)	0.32	0.18	(14)	0.25	0.24	(24)	0.25

[a] Degrees of freedom are shown in parentheses for both males and females.

* Significant at .05 level.

** Significant at .01 level.

Table 23

Relationship (C) between Occupational Goal Classifications and Educational Choices by Educational Levels

		Contingency Coefficient of Choice With Occupational Goal Classification			
Educational Level	Choice	Males		Females	
6th grade, local	H.S. Program	0.34**	(24)[a]	0.45**	(20)
6th grade, military	H.S. Program	0.37**	(20)	0.52**	(20)
9th grade	H.S. Program	0.60**	(28)	0.64**	(36)
12th grade	Post H.S. Plan	0.49**	(32)	0.43**	(32)
University freshman	College	0.59**	(12)	0.50**	(12)
University senior	Major or Curriculum	0.57**	(8)	0.39**	(4)
Adult[1]	Class Activity	0.54**	(54)	0.55**	(54)
Median		0.54	(24)	0.50	(20)

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[a] Degrees of freedom are shown in parentheses.

[1] The adults were grouped according to present occupational classification.

Table 24

Relationship (C) between Certainty of Choice and Educational Choices by Educational Levels

	Certainty		
Educational Level	Males		Females
6th grade, local	0.24**	(16)[a]	0.27**
6th grade, military	0.27**	(16)	0.18
9th grade	0.30**	(16)	0.29**
12th grade	0.30**	(20)	0.34**
University freshman	0.22**	(12)	0.40**
University senior	0.34**	(12)	0.37**
Median	0.29	(16)	0.32

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[a] Degrees of freedom are shown in parenthesis for both males and females.

** Significant at .01 level.

Table 25

Relationship (C) Between Psychological Determinants and Educational Choices by Educational Levels

	Determinant								
	Values			Influences			Interests		
Educational Level	M		F	M		F	M		F
6th grade local	0.34**	(52)[a]	0.35*	0.35**	(48)	0.36**	0.44**	(40)	0.50**
6th grade military	0.26	(52)	0.50**	0.33**	(52)	0.33**	0.50**	(44)	0.54**
9th grade	0.40**	(56)	0.41**	0.35**	(56)	0.29**	0.51**	(44)	0.56**
12th grade	0.36**	(52)	0.36**	0.38**	(60)	0.29**	0.36** (56)	(44)	0.32**
University freshman	0.45**	(44)	0.46**	0.45**	(52)	0.42**	0.68** (40)	(36)	0.64**
University senior	0.56**	(44)	0.56**	0.59**	(48)	0.59**	0.71**	(32)	0.62**
Adult	0.76**	(112)	0.78**	0.56**	(84)	0.57**	0.59**	(77)	0.65**
Median	0.45	(52)	0.46	0.38	(56)	0.36	0.51	(44)	0.56

[a] Degrees of freedom are shown in parentheses to right for males; are omitted for females if similar to males.

** Significant at .01 level.

that this method of treating the sixth grade would provide a further control on suspected variations in administering the survey and in respondent cooperation and understanding.

Sociological determinants

Contingency coefficients expressing the extent of relationship between sociological attributes and educational programs for six educational level samples are presented in Table 22. National-ethnic background of father was significantly associated with choice for both sexes at all levels. In addition (not shown in table) for the adult students C between national-ethnic affiliation and educational program was 0.51 for the males and 0.54 for the females. Generation of father was significantly related to choices only at the 9th, 12th and university freshman levels. Occupational classification of father for nine of twelve samples was significantly associated with educational choice, but only one C exceeded 0.30.

Occupational goal

As shown in Table 23, at all levels for both male and female students occupational goals (classified according to socio-economic levels) were significantly associated with educational program. The median contingency coefficient for the males was 0.54, for the female populations 0.50.

Certainty of choice

Except for 6th grade military females, degree of certainty was significantly correlated with choice (Table 24). For the older female groups the relationships were slightly higher.

Psychological determinants

When the check list items classified as values, influences and interests were analyzed for relationship to available educational choices at various levels (Table 25) the contingency coefficients at all levels, except sixth grade military males for values, were statistically significant. For both male and female student populations interests tended to be more closely related to choice than values which in turn were slightly higher on the whole than influences. A tendency for closer relationships at the higher educational levels was noted for values and influences.

CHAPTER IV

PATTERNS OF DETERMINANTS

In the preceding chapter the extent of the relationships between independent categories and educational plan or program groupings within each of the seven male and seven female sub-populations were summarized by reporting contingency coefficients. The significant and salient patterns of determinants will now be presented in detail. Readers with little interest in specific educational programs in Hawaii may wish to proceed directly to Chapter V.

Analyses of Data

In order to compute the contingency coefficients items were cross-tabulated against educational choices for each of the male and female populations.[1] The observed proportion for each cell, within the distribution of each educational choice (program, plan, college, or course grouping), was then tested by chi square for significance. These analyses permitted the summary in the following sections of significant and salient differences between observed and expected proportions by items at each educational level within each category.

After reporting the analyses of the cross-tabulations by rows, the same data will be presented on the basis of analyses by columns. That is, salient determinants will be summarized by the program, plans, colleges, or course groupings of the educational level populations.

Salient relationship

Salient items are underlined in the following text. A salient relationship is defined for purposes of this report as one which was statistically significant, important and reliable. Statistical significance, defined here as an associated probability of occurrence (two-tailed) at the .05 level, was ascertained for the differences between expected and obtained frequencies in each cell, row and column by computing chi squares (Siegel, 1956). A relationship between determinant and choice was considered to be important if the obtained percentage in a given cell differed by more than one half from the expected percentage.[2] By inspection, furthermore, we concluded that a difference of this order tended to exceed the differences obtained between first and second administration in our stability studies (Appendix I). Significant differences which failed to meet the above standards of importance and reliability should be interpreted cautiously, particularly because the sizes of subgroups varied greatly. It should be clear that all salient relationships were significant, important, and reliable but significant relationships might be unimportant or unstable.

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[1] See Appendix II for summary data.

[2] We applied the following formula, $EC = < \frac{T}{\mp 2}$, where EC is a salient percentage within an educational choice grouping and T is percentage within total group of those responding to a single determinant or attribute.

General Values: Significant and Salient Determinants by Educational Levels

Satisfaction from field

At the 6th grade local and military level for the males, the significantly larger proportion who checked this item were in the college preparatory scientific group; at the 9th grade level there were more in college preparatory scientific;[1] at the high school senior level more planned on further education; and at the adult level there were more in civic training and cultural opportunities course program groupings.

Significantly fewer males checked this item at the 9th grade level who preferred business and terminal programs; at the high school senior level who planned on military service, work or other; at the university freshman and senior levels enrolled in Business; and at the adult level fewer were found in the naturalization group who checked this item.

For the female groups significantly more who checked satisfaction from field were found at the 9th grade level in college preparatory scientific and college preparatory general; at the high school senior level, further education; and at the adult level more were in homemaking, civic training, and cultural opportunities course program groupings.

Of the females there were significantly fewer at the 9th grade level selecting technical and terminal programs; at the high school senior level planning on work, or other; at the adult level, fewer were in basic elementary, advanced elementary, secondary credit, and naturalization course program groupings.

It should also be noted that for this item there were no significant differences for either sex at the university freshman and senior levels except that there were fewer males in Business at both levels.

Security of employment

Among the males there were proportionately more selecting this item than would be expected by chance in the 9th grade in college preparatory scientific; in the 12th grade planning on education; at the university freshman level enrolled in Engineering; at the university senior level enrolled in Applied Science (Engineering) and Education; and at the adult level enrolled in a secondary credit course.

There were significantly smaller percentages of male respondents at the 9th grade level preferring terminal high school programs; at the 12th grade level planning on military service or work; at the college freshman level enrolled in Arts and Sciences; at the college senior level enrolled in Arts and Sciences and Business; at the adult education level enrolled in homemaking or cultural opportunities.

For the female respondents the checking of security of employment was significantly associated with larger proportions in the 6th grade military preferring a business program; at the 9th grade preferring a college preparatory scientific or business program; in the 12th grade planning on further education; at the university freshman level with enrollment in Education; and at the adult level with enrollment in basic elementary, advanced elementary, secondary credit, and secondary non-credit programs.

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[1] Underlined items are salient as explained in the preceding section.

Chance to serve others

In the male populations chance to serve others was significantly associated in the 9th grade with college preparatory scientific and business programs; in the 12th grade with plans for education; at the university freshman level with enrollment in the college of Education; at the university senior level with enrollment in the college of Education; and at the adult level with enrollment in homemaking.

Significantly fewer males who checked chance to serve others at the high school senior level planned on work; at the university freshman level were enrolled in Engineering; at the university senior level were enrolled in Applied Science (Engineering); and at the adult education level were taking a course in cultural opportunities.

Among the female respondents chance to serve others was checked by significantly more in proportion in the 6th grade military district who preferred college preparatory scientific and technical programs; in the 9th grade who preferred college preparatory scientific and college preparatory general; at the high school senior level who planned on further education; at the university freshman level who were registered in Nursing; and at the adult level who were registered in basic elementary courses.

Significantly fewer females in proportion at the 6th grade military preferred college preparatory general or business programs; at the 9th grade preferred business; at the 12th grade planned on work or other; at the university freshman were registered in Business; at the college senior were registered in homemaking or cultural opportunities.

Opportunity for advancement

There were significantly more males represented at the 9th grade level preferring college preparatory scientific; at the high school senior planning on education; at the university freshman enrolled in Engineering; at the university senior enrolled in Applied Science (Engineering); and at the adult enrolled in secondary credit.

Significantly smaller proportions of males were found who checked opportunity for advancement at the 9th grade and who preferred a technical and terminal high school program; at the high school senior level who planned on military service, work, or other; at the university freshman who were registered in Education; at the university senior who were registered in Arts and Sciences; and at the adult level who were enrolled in homemaking, naturalization and cultural opportunities programs.

For the female respondents proportionately more at a significant level of confidence checked opportunity for advancement at the 6th grade military level who preferred a business high school study program; at the 9th grade who preferred a business program; at the high school senior who planned on further education; at the university senior who were enrolled in Applied Science, Agriculture or Business; and at the adult level who were enrolled in advanced elementary, secondary credit, basic elementary and secondary non-credit.

There were in the female groups significantly fewer at the 6th grade military level who preferred a technical program; at the 9th grade who preferred a terminal program; at the 12th grade who planned on work or other; at the university freshman who were enrolled in Education; at the university senior level who were enrolled in Education; and at the adult who were taking courses in homemaking and cultural opportunities.

Self-improvement

For the male subpopulations self-improvement was a significant determinant for those at the 9th grade who preferred a college preparatory general program; at the university freshman for those registered in Arts and Sciences; and at the adult level for those enrolled in secondary credit.

Significantly fewer male respondents in proportion checked self-improvement at the high school senior level who planned on work; at the university freshman who registered in Engineering; and at the adult level who were registered in homemaking and cultural opportunities.

For the female respondents self-improvement was significantly more frequently checked at the 9th grade by those preferring college preparatory general; at the high school senior by those planning on further education; at the university freshman by those enrolled in Agriculture (home economics); and at the adult by those taking courses in basic elementary, secondary credit, and civic training.

Fewer females checked self-improvement as a determinant in the 9th grade who preferred a college preparatory scientific and business programs; at the high school senior who planned on work; or other; at the university freshman who were registered in Education; and at the adult by those taking courses in homemaking, naturalization and cultural opportunities.

Aptitude

For the male respondents aptitude was significantly more frequently considered a determinant in the 9th grade by those who preferred a college preparatory scientific high school program; at the high school senior level by those planning on further education; at the university freshman by those enrolled in Engineering; and at the adult by those in basic elementary courses.

Fewer males than expected checked aptitude at the 9th grade level who preferred a business or terminal high school study program; at the twelfth who expected to enter military service, work, or to follow other plans.

For the females those who checked aptitude more frequently than expected at the 6th grade military level preferred a college preparatory general program; at the college freshman were registered in Business Administration and at the adult were registered in basic elementary. Significantly fewer females at the 12th grade level planned on other.

Potential income

For the male respondents potential income was a significant determinant in the case at the 6th grade local of those preferring a business high school program; at the 9th grade of those preferring college preparatory scientific; at the 12th grade those planning on education; at the college freshman those registered in Engineering;

at the college senior those enrolled in Applied Science (engineering); and at the adult of those taking secondary credit and homemaking courses.

Significantly fewer male respondents checked income at the 9th grade who preferred technical and terminal high school programs; at the high school senior who planned on military service, work or other; at the college freshman who were registered in Education; at the college senior who were registered in Arts and Sciences and Education and at the adult who were taking naturalization, basic elementary or cultural opportunities courses.

Significantly fewer female respondents checked potential income at the high school level who were considering military service; at the adult level who were registered in homemaking and cultural opportunities.

Significantly more female respondents checked income at the 6th grade military level who preferred a business program; at the 9th grade who preferred a business program; and at the adult level registered in a secondary credit program.

Preparation for specialization

For the male respondents preparation for specialization was significantly associated with the preference for college preparatory scientific at the 9th grade level; education at the high school level; enrollment in Arts and Sciences at the university freshman level; and registration in secondary credit at the adult level.

For the males preparation for specialization was reported to be significantly less influential at the 9th grade by those preferring a business or terminal program; at the high school senior for those planning on work or other; at the adult by those registered in naturalization and cultural opportunities.

For the female sub-populations preparation for specialization was found to be significantly more often cited by those at the 9th grade preferring a college preparatory scientific program; at the high school senior by those planning on further education; at the college senior by those registered in Applied Science (Nursing); at the adult by those registered in secondary credit.

Fewer 9th grade females checked preparation for specialization who preferred a terminal program; fewer high school senior females who planned on military service, work, or other; fewer university freshmen who were registered in Education; and fewer adult education students taking naturalization and cultural opportunities programs.

Practicality of subject

For the males practicality of subject was more frequently cited as a determinant at the 9th grade level by those preferring college preparatory scientific; by those planning on education in the 12th grade; and by those registered in secondary non-credit and homemaking courses at the adult education level.

Practicality of subject for the males was significantly less influential at the 9th grade level upon those preferring technical and terminal programs; at the high school level upon those planning on work or other; and at the adult level upon those registered in advanced elementary, naturalization course programs.

Female respondents significantly more frequently indicated practicality of subject as a determinant at the 9th grade level of college preparatory scientific and college preparatory general programs; at the high school level of further education; at the university freshman level of Agriculture (home economics); at the university senior of Agriculture (home economics); and at the adult level of homemaking.

Significantly fewer females were concerned with practicality of subject who preferred technical, business, and terminal high school study programs at the 9th grade level; who planned on military service, work or other at the high school senior level; and who were registered in Education at the university senior level; who were taking advanced elementary, naturalization or cultural opportunities courses at the adult education level.

Independence

For the males independence was significantly more important to those at the high school level who planned on military service; at the university freshman level who were registered in Arts and Sciences; and at the adult level who were taking basic elementary and advanced elementary course programs.

For the males considerations of independence were significantly less important for college freshmen registered in Business Administration; and for adults taking courses in homemaking and cultural opportunities.

In the case of the female sub-populations independence was found significantly more frequently associated with enrollment in basic elementary and advanced elementary at the adult level. Independence was significantly less important at the 9th grade level for those females who preferred a college preparatory scientific program; and at the adult level for those enrolled in homemaking, civic training, naturalization, and cultural opportunities.

Prestige

For the male respondents those who admitted that considerations of prestige related to their choices were found at the 9th grade to prefer a college preparatory scientific program; at the 12th grade to plan on more education; and at the adult to be registered in basic elementary.

For the males considerations of prestige were said to be less important at the 9th grade level by those preferring technical or terminal programs; at the high school senior level by those considering military service; at the university freshman by those registered in Education.

Significantly more female respondents checked prestige in the 9th grade who planned to enter the college preparatory general program; at the high school senior level who planned on further education; at the university level who were registered in Education as freshmen; and at the adult level who were taking basic elementary courses.

Prestige was less important to females at the 9th grade level who preferred business; at the high school senior level who indicated work and other plans; at the university freshman level who were registered in Arts and Sciences; at the adult level who were taking courses in homemaking or cultural opportunities.

Path of least resistance

A number of similar items used in the five basic instruments are considered here together. For the male populations, 9th grade students significantly more frequently preferred a terminal high school program because it was either the fastest path to a diploma or the courses were easy; proportionately more high school seniors checked work or other as their plans after graduation because they were the easiest thing to do; and significantly more secondary credit adult students checked fastest path to a diploma.

For the males this type of determinant had significantly less influence upon those preferring college preparatory general in the 6th grade local group; those preferring the college preparatory scientific program in the 9th grade group; and on those planning on further education in the 12th grade sample. Adults registered in homemaking, naturalization or cultural opportunities were less likely to check fastest path to a diploma, and those in homemaking to check easy courses.

For the female respondents, there were significantly larger proportions at the 6th grade local level who checked fastest path to a diploma and who preferred a terminal secondary school study program; at the 9th grade level who checked fastest path to a degree and easy courses and elected the technical and terminal programs; and at the high school senior level who considered "the easiest thing to do" as determining other plans. At the adult level those who indicated that the fastest path to a degree was a determinant were registered in advanced elementary and secondary credit course grouping and registration in basic elementary was associated with "easy courses."

On the other hand, there were significant negative associations at the 9th grade level between fastest path to a diploma and easy courses and preference for college preparatory scientific and college preparatory general; at the adult level between fastest path to diploma and homemaking, naturalization and cultural opportunities course groupings and between easy courses and homemaking.

Parenthood

The sub-populations except for the university freshmen and seniors were presented with an item concerned with preparation for parenthood and family living as a reason for educational or vocational choice. For the male respondents at the 6th grade local level significantly more checked this item who preferred a terminal high school study program; at the high school level who planned on work or other; and at the adult educational level who were registered in basic elementary and advanced elementary. At the 6th grade local level significantly fewer in college preparatory scientific checked parenthood; at the 12th grade in the group planning on further education; and at the adult level significantly fewer men checked family living who were registered in secondary credit or cultural opportunities.

For the female respondents preparation for parenthood and family living was positively associated with the choice of a technical program for 6th grade military females; with technical or terminal study programs at the 9th grade level; with further education at the high school level; and at the adult level with enrollment in basic elementary and advanced elementary programs.

Fewer females in proportion checked parenthood at the 6th grade military level who preferred college preparatory scientific; at the 9th grade level who preferred business high school study programs; at the high school level who planned on apprenticeship; military service or work; and at the adult level who were registered in secondary credit, civic training, naturalization or cultural opportunities.

Interests: Determinant Items by Levels

Children and youth

For the male respondents there were significant positive relationship with choice of terminal secondary program by 6th grade local pupils; with preference for college preparatory general and terminal secondary programs by 9th graders; with plan on further education by 12th graders; and with registration in Education by university freshmen and seniors.

For the female populations proportionately more military 6th graders preferred technical; more 9th graders preferred college preparatory scientific and college preparatory general; more 12th graders planned on further education; more university freshmen were registered in Education; and more university seniors and adults were enrolled in secondary credit and civic training programs.

For the males a significant lack of relationship was shown at the 9th grade with college preparatory scientific and technical secondary school program; at the freshman level with registration in the colleges of Engineering and Business; and at the senior level with Applied Science (Engineering) and Business.

For the females a lack of relationship was shown at the 6th grade local and military levels with college preparatory scientific; at the 9th grade with business; at the 12th grade with apprenticeship, military service, and work; at the freshman with the colleges of Arts and Sciences and Business; at the senior with colleges of Arts and Sciences and Business; and at the adult with homemaking.

Science

For the males a positive relationship was shown at the 6th grade local and military levels with college preparatory scientific; at the 9th grade with college preparatory scientific; at the 12th with further education; at the freshman with the colleges of Arts and Sciences and Engineering; at the senior with Applied Science (Engineering) and Agriculture; and at the adult with secondary credit and secondary non-credit.

There were significantly smaller relationships at the 6th grade military level with college preparatory general, business and terminal; at the 6th grade local with technical; at the 9th grade with college preparatory general, technical, business and terminal; at the 12th with apprenticeship, military service and work; at the freshman with the colleges of Education and Business; at the senior with the college of Business Administration; and at the adult with basic elementary, homemaking and naturalization course groupings.

For the girls there were positive relationships at the 6th grade local and military levels with college preparatory scientific; at the 9th grade with college preparatory scientific; at the 12th grade with further education; at the university freshman with Nursing; at the university senior with Applied Science (Nursing); and at the adult with advanced elementary and civic training.

There were significant negative relationships at the 6th grade military and local with business; at the 9th grade with business and terminal; at the 12th grade with work and other; at the university freshman with Education and Business; at the university senior with Education; and at the adult with basic elementary.

Ideas

For the males there were significant positive relationships at the 9th grade with college preparatory scientific; at the 12th grade with further education; and at the adult with civic training.

There were negative relationships at the 9th grade with technical and terminal; at the secondary with work and other; at the adult with naturalization.

For the girls there were positive relationships at the 9th grade with college preparatory general; at the senior with the college of Arts and Sciences; and at the adult with civic training.

A significant absence of relationship for females was noted at the 6th grade local with terminal; at the 9th grade with technical; and at the adult with cultural opportunities and naturalization.

Adults

For the males there was a positive relationship at the 6th grade local level with business; at the 6th grade military level with college preparatory general; at the 9th grade with business; at the university freshman with Business; and at the adult with basic elementary.

There were significant absences of relationship at the 9th grade with technical, at the college freshman level with Engineering; at the university senior level with Applied Science (Engineering); and at the adult level with cultural opportunities.

For the females there were positive relationships at the 9th grade with technical; at the university freshman with Nursing and Business; at the university senior with Business; and at the adult with advanced elementary program choices.

There was a significant lack of relationship for the girls at the 9th grade with business; at the university freshman with Education.

Numbers

For the males there was a positive relationship at the 6th grade military with college preparatory scientific; at the 9th grade with college preparatory scientific; at the senior level with further education; at university freshman with Engineering and Business; at university senior with Applied Science (Engineering) and Business; and at adult with secondary credit.

For the males there was a significant absence of relationship at the 6th grade military with terminal; at the 9th grade with technical and terminal; at the 12th grade with military service, work and other; at the university freshman with Arts and Sciences, Education, and Agriculture; at the university senior with Arts and Sciences and Education; and at the adult with advanced elementary, homemaking, civic training, naturalization, and cultural opportunities.

For the girls there was a significant relationship at the 9th grade with college preparatory scientific; at the university freshman level with Business; at the senior level with Business; and at the adult level with basic elementary, advanced elementary, secondary credit, and secondary non-credit.

For the girls there were significant negative relationships at the 6th grade local level with technical; at the 9th grade with college preparatory general, technical, and terminal; at the 12th grade level with other; and at the adult level with homemaking, civic training, naturalization, and cultural opportunities.

Music

For the boys there were significant relationships with terminal and college preparatory general at the 6th grade military level; at the 6th grade local level with terminal; at the 9th grade level with college preparatory general and terminal; at the university senior with Education; and at the adult with cultural opportunities.

Negative relationships were obtained at the 6th grade local level with college preparatory scientific; at the 6th grade military level with college preparatory scientific; at the 9th grade level with college preparatory scientific; and at the adult level with homemaking.

For the females there were positive relationships with college preparatory general at the 6th grade military level; at the 9th grade with college preparatory general and terminal; at the 12th grade with military service; and at the adult with advanced elementary and cultural opportunities.

There were negative relationships at the 6th grade local and military levels with college preparatory scientific; at the 9th grade with college preparatory scientific and business; at university freshman with Nursing; and at the adult, basic elementary, secondary credit and homemaking.

Art

There were positive relationships at the 6th grade local with terminal and at the 6th grade military with college preparatory general for the males; at the 9th grade with college preparatory general; at the 12th grade with further education; at the university freshman with Arts and Sciences; and at the adult with cultural opportunities. At the college senior level the item was not presented separately.

For the males there were negative relationships at the 6th grade local and military with college preparatory scientific; at the 9th grade with college preparatory scientific; at the 12th grade with military service; and at the college freshman with Business.

For the females an interest in art was associated at the 6th grade local with college preparatory general and terminal; at the 6th grade military with college preparatory general; at the 9th grade with college preparatory general and technical; at the 12th grade with further education; and at the adult with homemaking and cultural opportunities.

A significantly smaller than expected percentage of females checked an interest in art as a determinant who at the 6th grade local level elected the college preparatory scientific secondary study program; at the 6th grade military level preferred business; at the 9th grade level elected college preparatory scientific or business programs; at the 12th grade level planned on work or other; and at the adult level were registered in the basic elementary course grouping.

Words

There was a positive relationship between an interest in work with words for the males at the 9th grade level with college preparatory general and business; at the 12th grade with education; and at the adult with basic elementary and advanced elementary class activities.

Significant negative relationships were found at the 9th grade with college preparatory scientific and technical; at the 12th grade with apprenticeship; at the university freshman with Engineering; and at the adult with homemaking and cultural opportunities.

For the females there was a significant relationship at the 6th grade military with business; at the 9th grade with business; at the 12th grade with further education; and at the adult with basic elementary and advanced elementary.

There was an absence of relationship at the 6th grade military with technical and college preparatory scientific programs; at the 6th grade local with technical; at the 9th grade with college preparatory scientific, technical, and terminal; at the twelfth grade with work, military service, and other; at the college freshman level with Nursing and Agriculture; and at the adult level with civic training, naturalization, cultural opportunities and homemaking.

Plants and animals

For the males there were positive relationships at the 6th grade military level with technical and terminal; at the 9th grade with terminal; at the college freshman with Arts and Sciences and Agriculture; and at the adult with naturalization.

There were significant negative relationships for the males at the 6th grade local with business; at the 6th grade military with college preparatory scientific; and at the university freshman with Engineering, Education, and Business.

For the females there were positive relationships at the 6th grade local with terminal; at the 6th grade military with college preparatory scientific; at the 9th grade with college preparatory scientific, technical, and terminal program preferences; at the university freshman level with Nursing and at the adult with homemaking.

Significant negative relationships for the females were observed at the 9th grade with college preparatory general, and business; and at the adult with basic elementary and secondary credit courses.

Food

For the males there were positive relationships at the 6th grade military with technical; at the 9th grade with terminal; at the 12th grade with work and other.

Significant negative relationships were found at the 6th grade military with college preparatory scientific; at the 9th grade with college preparatory scientific;

at the 12th grade with further education; and at the adult with enrollment in secondary credit courses.

For the females there were positive relationships at the 6th grade local and military with technical; at the 9th grade with technical and terminal; at the 12th grade with work and other; and at the adult with homemaking courses.

There were negative relationships at the 6th grade military with college preparatory scientific; at the 9th grade with college preparatory scientific, college preparatory general and business; at the 12th grade with further education; and at the adult with secondary and cultural opportunities.

External Influences: Determinant Items by Levels

Classes

For the male respondents significantly more indicated classes as an external determinant at the 6th grade military level who preferred college preparatory scientific; at the 9th grade level who preferred college preparatory scientific; at the high school senior level who planned on further education; at the university freshman level who were registered in Engineering; at the university senior level who were registered in Applied Science (Engineering); and at the adult level who were taking secondary credit courses.

Significantly fewer male respondents than might be expected checked classes at the ninth grade level who preferred a technical study program; at the high school senior level who planned on military service, work or other; at the college freshman level who were registered in Business Administration or Agriculture; at the college senior level who were enrolled in Business; and at the adult level who were taking basic elementary, homemaking, naturalization or cultural opportunities course programs.

Where the responses of the female populations were considered in terms of the relationship between classes and educational choice, significantly more students at the 6th grade military level preferred college preparatory scientific; at the 6th grade local level preferred college preparatory general; at the 9th grade level preferred college preparatory scientific and college preparatory general; at the college freshman level enrolled in Business; and at the adult level were registered in advanced elementary or secondary credit course groupings.

Significantly fewer females indicated that classes influenced them who hoped to be enrolled in business or terminal high school study programs and who were at the ninth grade level; who planned on military service or other who were at the high school senior level; and who were registered in basic elementary or homemaking and who were at the adult level.

Both male and female college seniors and female college freshmen in Arts and Sciences in significantly larger proportions indicated the influence of college courses; and in Applied Science (Engineering or Nursing) were less influenced by college courses.

Parents

For the male respondents more individuals at the 6th grade local level who preferred a terminal high school program were influenced by their parents; at the 9th grade level more who preferred a college preparatory scientific or a college preparatory general program; at the high school senior level more who planned on education.

On the other hand, parents were less frequently cited at the 9th grade level by males preferring technical programs; and at the high school level by those intending to enter apprenticeship or military service.

For the female sub-populations parents were indicated as more influential at the 6th grade local level by those preferring college preparatory general; at the high school level by those planning on further education; while university senior and freshman female students significantly more frequently indicated their parents had influenced them in choosing the college of Education. **Parents** were less frequently cited at the 9th grade level by females preferring a business program; at the 12th grade level by those planning on work and other; at the freshman level by those registered in Arts and Sciences and Nursing; and at the college senior level by those enrolled in Arts and Sciences and Applied Science (Nursing).

Aptitude and interest tests

For the male respondents aptitude and interest tests were checked significantly more frequently at the 9th grade level by those preferring a college preparatory scientific high school study program; at the 12th grade level by those anticipating further education; and at the college senior by those enrolled in Applied Science (Engineering). The item was not presented to the adult education population.

For the males aptitude and interest tests were checked in proportion less frequently than would be expected by chance at the 9th grade level by those preferring technical and terminal programs; at the 12th grade level by those planning on entering military service, work or other.

For the female respondents the percentages of those responding were significantly larger in reporting the influence of aptitude and interest tests at the high school senior level for those planning further education; at the college freshman level for those in Business; and at the university senior level for those registered in Applied Science (Nursing).

Fewer than expected proportions of females reported they were influenced by aptitude and interest tests at the 9th grade level within the technical and terminal preference groups; and at the high school senior level within the groups planning on work or other.

Teacher

For the male respondents teacher was significantly more influential with the 9th grade level for those preferring college preparatory scientific and college preparatory general; for the high school seniors, **high** school teacher by those planning on further education; at the freshman by those registering in the college of Education; and at the senior by those registered in the college of Education. The item "college instructor" was more frequently checked by seniors in Arts and Sciences. At the adult level high school teacher was significantly more frequently checked by those in basic elementary and naturalization program groupings.

For the female respondents there were significantly more in proportion than would be expected by chance who indicated the influence of teacher at the 9th grade level in the group preferring college preparatory general; who indicated high school teacher at the university freshman level in the group registered in Education; and at the adult level who indicated high school teacher among those registered in the basic elementary course grouping. The item college instructor was more frequently checked at the college senior level by those enrolled in Arts and Sciences.

For the males teacher was less frequently noted as an influence at the 9th grade level by those who preferred technical or terminal high school programs; at the high school senior level by those planning on military service or work; at the adult education level by those registered in homemaking.

Friends

Among the male respondents friends were reported as significantly more influential at the 6th grade local level by those preferring a terminal program; at the 9th grade level by those preferring a terminal program; at the high school senior level by those planning on military service; and at the adult level by those registered in basic elementary.

For themales friends were less frequently checked as influential at the 9th grade level by those who preferred a business program; and at the adult level by those registered in a secondary credit program.

For the female respondents friends were significantly more frequently cited as an influence at the 9th grade level by those preferring the college preparatory general program; and at the adult level by those registered in basic elementary and cultural opportunities program groupings.

Friends were significantly less influential upon 9th grade girls preferring a college preparatory scientific high school study program; and upon adult women registered in secondary credit and naturalization course program groupings.

Work experience

For the male respondents significantly more frequently than expected work experience was cited as influential upon those 6th grade military pupils preferring a college preparatory scientific high school study program; upon 9th graders preferring the technical high school study program; upon high school seniors planning on apprenticeship and work; upon college freshmen registered in Agriculture; upon college seniors in Business Administration; and upon adults enrolled in secondary credit and secondary non-credit course program groupings.

Significantly fewer male respondents indicated that work experience was influential at the 9th grade level who preferred a college preparatory scientific, college preparatory general, or terminal high school study program; at the high school senior level who planned on further education; and at the adult level who were registered in the naturalization and cultural opportunities course program groupings.

For the female respondents work experience was significantly associated with preference for college preparatory scientific high school study program at the 6th grade military level; with enrollment in Education at the college freshman level; and with registration in secondary credit, secondary non-credit and civic training courses at the adult level.

Work experience was less influential than would be expected by chance upon females registered as freshmen and seniors in the college of Arts and Sciences and adult woman enrolled in naturalization, cultural opportunities and homemaking course programs.

Counselor

Significantly more male respondents who cited counselor as influential upon educational choice were classed as 9th grade pupils preferring a college preparatory scientific high school study program; high school seniors planning on education; and adults registered in secondary credit courses.

The counselor was significantly less influential for 9th grade males who preferred the technical high school program; high school seniors planning on military service and work; and for adults registered in homemaking and cultural opportunities.

For the female respondents the item counselor was reported as influencing choice by a significantly larger proportion of those at the 9th grade who preferred a college preparatory general high school study program; at the 12th grade who planned on further education; and at the adult level who were registered in secondary credit and secondary non-credit course groupings.

Relatively fewer of the girls who were influenced by counselors were 9th grade pupils preferring high school study programs in business; high school seniors planning on work and other; and adults studying homemaking.

Relatives

Relatives were seen as significantly more influential by 6th grade military males who preferred the college preparatory general program in high school; by 12th graders planning on further education; by college seniors registered in Education; and by adults enrolled in advanced elementary and basic elementary course programs.

Significantly smaller percentages of male respondents checked relatives as influences upon choice in the Arts and Sciences college senior group and the secondary credit adult course program grouping.

For the female respondents there were significantly larger proportions of college seniors who said they were influenced by relatives registered in Education and of adults in basic elementary course programs.

Fewer females in proportion who were influenced by relatives were college seniors in Arts and Sciences and adults in secondary credit, homemaking and civic training course program groupings.

Hobby

Males checking hobby as an influence upon educational-vocational choice were more likely than chance expectation to be 6th grade local pupils who preferred a technical high school study program; 9th graders who preferred the college preparatory scientific high school study program; high school seniors who planned on further education; college freshmen registered in Engineering; college seniors registered in Applied Science (Engineering) and Agriculture; and adults enrolled in homemaking and cultural opportunities course groupings.

Hobby was reported as being significantly less influential upon 9th grade boys who preferred a business high school study program; high school seniors who planned on military service and other; college freshmen registered in Business; college seniors registered in Business and adults enrolled in the secondary credit course program grouping.

For the female populations in this study hobby was checked significantly more frequently by 6th grade military females who preferred the college preparatory scientific high school study program; by college freshmen in Agriculture (Home Economics); by college seniors in Agriculture; and by adults registered in homemaking and cultural opportunities.

Less frequently than would be expected by chance hobby was reported as influential by 6th grade military females who preferred a business high school study program; by 9th grade females who preferred a business high school study program; by college freshmen registered in Nursing; by adults enrolled in basic elementary, advanced elementary, secondary credit, secondary non-credit and naturalization course groupings.

Free time activities

It should be noted that the wording of this item was somewhat different in the five basic instruments.

Male respondents in significantly larger proportions cited free time activities as influential when registered as college freshmen or seniors in Education; and as adults in cultural opportunities.

Ninth grade males who preferred a high school study program in business significantly less frequently checked free time activities as did 12th graders who preferred military service; college freshmen registered in Engineering; college seniors registered in Applied Science (Engineering); and adults in basic elementary.

For the female respondents significantly more in proportion at the 9th grade level who preferred a college preparatory general high school study program indicated that they were influenced by free time activities; as did those at the high school senior level who planned on education; and adults who were registered in cultural opportunities were influenced by recreation.

For the females there was significantly less relationship among the 9th graders between a preference for the business program and an indication that free time activities were influential; among the high school seniors between enrollment in secondary credit and basic elementary courses and reported influence of recreation.

Random choice

Among the male populations significantly more in proportion than would be expected by chance indicated that their choice was a random one at the high school senior level who planned on work or other and at the adult level who were registered in basic elementary education.

Significantly fewer males said that random choice was influential who were in the 9th grade and preferred a college preparatory scientific high school study program; who were in their high school senior year and planned on further education; and who were adults and were enrolled in secondary credit courses.

For the female populations in these studies random choice was significantly more frequently indicated as a determinant by high school seniors who planned on work; and by adults who were registered in basic elementary and naturalization courses.

Smaller percentages of girls responded to random choice at a significant level of confidence who were 6th grade military females and preferred a college preparatory scientific high school study program; who were high school seniors planning on further education and who were enrolled as adults in secondary credit, homemaking and cultural opportunities course program groupings.

People in the field

The item, "People in the field of specialization," was for the men not significantly more influential upon any of the choice groups within the four public school samples. Military 6th graders who preferred a terminal high school study program checked it less frequently as did high school seniors who planned on work. The college and adult groups were not sampled for this item.

In the case of the female populations local 6th graders who preferred a high school business study program were significantly more frequently influenced by people in the field, as were 9th graders who preferred a college preparatory scientific program and high school seniors who planned on further education.

There were significantly fewer females at the 9th grade level influenced by people in the field who preferred a technical and terminal program; and at the 12th grade planning on work and other.

Movies and TV

The influence of movies and TV was tested for the school populations. For the boys significantly more reported this as an external influence upon choice of the local 6th and 9th graders who preferred the terminal high school program; more military 6th graders also preferred the terminal high school program. For the girls, movies and TV were proportionately more influential upon those in the 6th grade military group who preferred a business high school study program.

[illegible]

Career Day programs had less influence than would be expected by chance upon high school senior males planning to work and high school senior females who had work or other plans. Significantly more high school senior girls who intended to enter military service cited the influence of career day program as did 6th grade military males preferring a terminal high school program, and 9th grade girls preferring a technical program.

For the male respondents the influence of ROTC training was significantly associated with high school seniors who planned to enter military service. Fewer high school males in proportion who planned on further education checked this item. The item was included only in the high school senior survey.

National-ehnic Origin: Items by Levels

Caucasian

For the males there were significantly more respondents of Caucasian national-ethnic ancestry at the 9th grade level in college preparatory scientific and college preparatory general; at the university senior level in Arts and Sciences; and at the adult level enrolled in secondary credit and non-credit, homemaking, and cultural opportunities.

Caucasians were significantly less frequently found than would have been expected at the 9th grade in the technical secondary school preference group; at the college freshman in the Engineering College; and at the adult in basic elementary, advanced elementary, civic training and naturalization classes.

For the female respondents there were significantly more Caucasians than expected at the 6th grade level in college preparatory scientific and technical; at the 12th grade in work; at the college freshman and senior in Arts and Sciences; and at the adult level enrolled in cultural opportunities and homemaking. Significantly fewer persons of Caucasian background were found at the 12th grade in apprenticeship; at the college freshman in Education; and at the adult in basic elementary, advanced elementary, civic training and naturalization classes.

Filipino

Among the male respondent groups there were significantly more of Filipino ancestry at the 6th grade who chose terminal program; at the 9th grade level technical and terminal; at the 12th grade, apprenticeship, military service and work; and at the adult who were enrolled in basic elementary and naturalization.

A significantly smaller proportion of Filipinos was found at the 6th grade in college preparatory scientific; at the 9th grade in college preparatory scientific; at the secondary in further education; and at the adult in secondary credit and non-credit, homemaking, and cultural opportunities groupings.

When the female respondents were considered there were found to be significantly more females of Filipino ancestry at the 9th grade in business and terminal; at the 12th grade in apprenticeship, military service, work, and other; and at the adult level in naturalization, and advanced elementary classes.

There were significantly fewer females at the 9th grade level in college preparatory scientific and college preparatory general groupings; at the 12th grade in further education; and at the adult in cultural opportunities classes. There were not enough Filipino men and women registered at the university levels to permit analysis.

Chinese

At all levels but the 6th grade the proportion of Chinese was large enough to permit analysis. Among the male respondents it was found that significantly more at the 12th grade level planned on further education; and at the adult level were registered in homemaking.

Significantly fewer of Chinese ancestry were intending to enter military service at the 12th grade level; and were registered in naturalization at the adult level.

For the females there were significantly more of Chinese ancestry in Business at the college freshman level and in civic training and basic elementary at the adult level.

Significantly fewer Chinese at the 12th grade level were intending to enter apprenticeship; and were enrolled in homemaking and cultural opportunities classes at the adult level.

Hawaiian

The college samples were too small to permit meaningful analysis of the Hawaiian group. At the other educational levels significantly more male respondents of reported Hawaiian ancestry at the 9th grade level preferred technical and terminal programs; at the 12th grade group level preferred military service or other plans; and at the adult level selected secondary or homemaking.

Significantly fewer of the Hawaiian males were found in college preparatory scientific and college preparatory general at the 9th grade level; further education at the 12th grade level; and basic elementary and naturalization courses at the adult level.

For the females of the Hawaiian group there were significantly more who preferred terminal programs at the 6th grade local level; technical or terminal program at the 9th grade level; military service, work or other at the 12th grade level; and civic training, homemaking and secondary credit and non-credit at the adult level.

Significantly fewer than would be expected chose at the 9th grade level college preparatory scientific and college preparatory general secondary school programs; at the 12th grade planned on further education; and at the adult were taking basic elementary and naturalization classes.

Japanese

Students of Japanese ancestry among the male respondents significantly more frequently preferred at the 6th grade local level the college preparatory scientific program; at the 9th grade, college preparatory scientific and college preparatory general study programs; at the high school senior level planned on further education; and at the adult were studying in basic elementary classes.

A smaller proportion of those of Japanese ancestry were found at the 6th grade local level in terminal; at the 9th grade level in technical and terminal study programs; at the 12th grade level in apprenticeship, military service, work or other plans; and at the adult in cultural opportunities class groupings.

There were more females of Japanese ancestry at the 9th grade level in college preparatory scientific and college preparatory general programs; at the 12th grade, in further education; at the university freshman in Education; and at the adult in basic elementary, advanced elementary, and naturalization classifications.

Fewer Japanese females than expected assigned themselves at the 6th grade local level to a terminal and at the 6th grade military to a technical secondary study program; at the 9th grade to technical, business and terminal programs and at the 12th grade to military service, work and other plans. Fewer of the college freshmen were registered in Arts and Sciences and of the adults were learning homemaking, civic training, and cultural opportunities.

Cosmopolitan (Mixed)

Among the males significantly more who considered themselves to be of mixed or cosmopolitan national-ethnic ancestry at the 9th grade level preferred a technical or terminal secondary study program; at the 12th grade planned on apprenticeship, military service or other. In the college and adult groups the numbers in this grouping were too small for analysis.

Significantly fewer persons of mixed national-ethnic background at the 9th grade assigned themselves to the college preparatory scientific study grouping. Fewer 12th grade males planned to continue education.

In the female groups at the 9th grade there were significantly more of mixed ancestry in the technical and terminal programs; at the 12th grade more planned on work or other; fewer in the mixed group at the 9th grade level planned on college preparatory scientific or college preparatory general and at the 12th grade level on further education.

Generation: Items by Level

First or second generation

Of the males who reported that they were immigrants or children of immigrants those in the 9th grade significantly more frequently indicated they preferred a terminal high school program and significantly less frequently were looking forward to a college preparatory scientific program. There were no other significant differences at the five educational levels sampled in the distributions of first and second generation respondents among educational preferences.

Third generation

Of the male respondents who reported their generation there were significantly more grandsons at the 9th grade level in the college preparatory scientific. There were significantly fewer proportionately at the 9th grade in the technical and terminal programs and at the 12th grade in apprenticeship, military service, work and other plan groups.

For the female respondents a significantly larger proportion of the grandchildren of immigrants were found at the 9th grade in the college preparatory scientific and college preparatory general choice groups; at 12th grade in the further education classification and at the college freshman level in the college of Education. Underrepresented in proportion at the 9th grade were girls in the technical, business, and *terminal* programs; at the 12th grade in the *military service*, work and *other* plans; and at the freshman level in the college of Arts and Sciences. In the military 6th grade groups, the *college preparatory general* and *technical* secondary school programs were preferred by significantly fewer females.

Fourth generation

For the male groups there were significantly more great grandchildren or before in the 6th grade military group who preferred a college preparatory scientific program; in the 9th grade there were also significantly more who preferred the college preparatory scientific program.

There were significantly fewer in the 9th grade who preferred technical and terminal programs and in the 12th grade who planned on working.

For the female respondents in the 6th grade military group there were proportionately more in the *college preparatory scientific* preference classification; at the 9th grade level more in the *college preparatory scientific*; and more college freshmen in *Arts and Sciences*. Significantly smaller percentages were observed in the 6th grade military group in the business program; at the 9th grade level in the business program; and at the college freshman level in Education.

Don't know and no answer

For both the male and female respondents at the 9th grade and 12th grade levels a tendency to check "I don't know" or not to answer was associated with a preference for non-college programs.

Does not apply - family is Hawaiian

In the 9th and 12th grade samples the number of persons checking this item was large enough to justify separate treatment. For the 9th grade males, significantly more preferred a technical or *terminal* high school program; significantly fewer *college preparatory scientific* and college preparatory general. This pattern was also true of the females although the females were not significantly represented in the technical program. For the 12th grade males more planned to enter *military service* and fewer to continue education; for the high school senior females this pattern was also true and in addition more preferred *apprenticeship* or *work*.

Father's Occupation: Items by Levels

In comparing reported father's occupation it should be recalled that the 6th, 9th and 12th grade pupils were given a list of 81 occupations. These were later classified by socio-economic level according to a modification of Edwards' standards, (Dole and Iwakami, 1961b). If N's were small, classifications were combined by inspection. Father's occupation was not included in the adult survey.

Two college senior classes were analyzed. The 1959 seniors' written responses were classified by the experimentors. The 1960 seniors checked pre-coded socio-economic level classification. In this section we have summarized significant relationships by sex of seven educational groups, representing five levels.

Professional and semi-professional

For the male respondents significantly higher percentages reported a professional or semi-professional occupational title for their fathers of 9th graders who preferred a college preparatory scientific high school study program and of high school seniors who planned on further education. There were significantly fewer sons among 9th grade pupils who preferred a high school technical study program and among high school seniors who planned on apprenticeship and military service.

For the female respondents significantly larger proportions reported professional and semi-professional fathers who at the 6th grade local and military level preferred college preparatory scientific. A larger proportion of 9th grade daughters of professional men preferred college preparatory scientific and college preparatory general. There were significantly more college freshmen who were daughters of professional and semi-professional men in the college of Arts and Sciences; and among the college seniors in the 1960 senior group there were again more enrolled in Arts and Sciences.

A smaller proportion of 6th grade military females who reported themselves to be daughters of professional and semi-professional men preferred a business high school study program; as did 9th grade daughters of professional men. Also fewer professional daughters preferred a terminal high school study program at the 9th grade.

Managerial or official

The sons of managers and officials were significantly more frequently found among the 6th grade military students who preferred a high school business study program and among high school seniors who planned on further education.

A smaller percentage of boys reported their fathers were managers or officials among the local 6th grade pupils who preferred a technical high school study program; among the 6th grade military who preferred a college preparatory scientific high school study program and among the high school seniors who planned on apprenticeship.

More daughters of managers and officials at the 9th grade level preferred the college preparatory general high school study program; at the high school senior level planned on further education; and at the 1959 college senior level were registered in Business Administration. Significantly fewer daughters of managers or officials were found among high school seniors who planned on military service, work or other.

Clerical or sales

Significantly more sons of clerical workers and salesmen in the 6th grade military group preferred a business high school study program; at the 9th grade preferred a college preparatory scientific program; and in the high school senior group intended to continue their education. Significantly fewer at the 9th grade preferred a technical or terminal high school study program; at the high school senior level planned to work.

Daughters of clerical workers and salesmen were found in larger proportions than expected at the 6th grade military level in the college preparatory general high school study program. Significantly fewer were found in the 6th grade military group who preferred a technical high school study program and at the high school senior level who planned on work.

Domestic, personal or protective service

The distributions of males and females in all choice groupings and at all levels sampled did not differ significantly from expected proportions.

Skilled

Sons of fathers in skilled job classifications did not differ from chance expectancy in any group examined. There were significantly more daughters of skilled workers at the 6th grade military level who preferred a business high school study program; at the 9th grade level who preferred a college preparatory scientific study program; at the college freshman level who were enrolled in Education.

Significantly fewer daughters of men in skilled occupations at the 6th grade military level preferred a college preparatory scientific high school study program; at the 9th grade level preferred a terminal high school study program; at the college freshman level were registered in Arts and Sciences or Agriculture.

Semi-skilled and unskilled

Significantly larger proportions of boys who reported their fathers' job to be semi-skilled and unskilled at the 9th grade level preferred technical, business and terminal high school study programs. More high school seniors whose fathers were semi-skilled planned on apprenticeship, military service and other; more sons of unskilled fathers at the high school level planned on military service and work. More college freshmen in Agriculture were the sons of unskilled and semi-skilled workers.

Fewer unskilled sons in the 6th grade military district preferred a college preparatory scientific high school study program. At the 9th grade level, fewer sons of semi-skilled workers preferred a college preparatory scientific high school and college preparatory general program, and of unskilled workers a college preparatory scientific program; and fewer sons of both semi- and unskilled fathers at the high school senior level planned on further education.

The daughters of unskilled workers were found in greater than expected proportions in the 6th grade local district who preferred a technical high school study program. Daughters of semi-skilled fathers in the military district preferred a terminal study program, as was true of the 9th grade children of unskilled workers. The daughters of semi-skilled workers at the 9th grade level preferred the technical, business and terminal high school study program. At the

12th grade level the daughters of unskilled workers had work or other plans. More daughters of semi-skilled workers looked forward to apprenticeship, military service, work and other plans.

Proportionately fewer 6th grade local daughters of semi-skilled fathers preferred the college preparatory scientific program. Fewer 9th grade daughters of semi-skilled workers preferred the college preparatory scientific and college preparatory general high school study programs. Fewer daughters at the high school senior level of semi-skilled and unskilled workers planned on higher education. In the public school groups there was also a tendency for children who did not know, who could not answer or who gave unclassifiable responses to select programs which did not involve higher education.

Occupational Preference: Items by Levels

The elementary and secondary school respondents and college freshmen were asked to indicate specific occupational goals, if any, from a list of 81 occupational titles (Dole and Iwakami, 1961b). The college seniors were asked to choose their goal from a list of occupations frequently entered by college graduates. The adults indicated the pre-coded occupational classification of their present job. The detailed breakdowns have been presented in the separate supplementary reports.

Professional

A significantly larger proportion of male respondents had goals which were classified as professional at the 6th grade military level and preferred a college preparatory scientific high school study program; at the 6th grade local level preferred college preparatory scientific; at the 9th grade level preferred a college preparatory scientific or a college preparatory general high school study program; at the high school senior level planned on education; at the college freshman level were registered in Engineering and Education; at the college senior level were registered in Applied Science (Engineering) and Education. Larger percentages of adults who were in professional jobs were enrolled in homemaking, civic training and cultural opportunities course groupings.

Significantly smaller percentages of males at the 6th grade level in the military group preferred technical and terminal high school study programs; at the 9th grade level preferred technical, business and terminal study programs; at the high school senior level planned on apprenticeship, military service, work and other; at the college freshman level were enrolled in Arts and Sciences, Business and Agriculture; at the college senior level were enrolled in Agriculture and Business. There were fewer professional adults registered in advanced elementary, basic elementary, and naturalization course groupings.

For the female populations there were significantly larger proportions of the 6th grade military and 9th grade groups who elected professional occupational goals and who preferred college preparatory scientific and local college preparatory general high school study programs; of the 6th grade local level who chose college preparatory general and college preparatory scientific programs; of high school seniors who planned on education and of university freshmen who were registered in Education.

Professional women predominated among adults who were enrolled in *civic training* courses and were also found in larger proportions in *cultural opportunities*.

Significantly fewer females at the local 6th grade level preferred business and terminal high school study programs; at the military 6th grade level preferred business; at the 9th grade level preferred technical, terminal and business; at the senior level planned on apprenticeship, *military service*, *work* and *other*; at the college freshman level registered in Arts and Sciences and *Business*; and at the college senior level registered in Business; at the adult level there were fewer professionals in *basic elementary* and *naturalization* groupings than expected.

Semi-professional

For the male respondents the largest proportion of those anticipating semi-professional occupations preferred a college preparatory general program at the local 6th grade level; a terminal study program at the military 6th grade level; and the college preparatory general and terminal programs at the 9th grade level. There were fewer boys at the 6th grade local and military levels and 9th grade levels who preferred college preparatory scientific and business programs.

Significantly larger proportions of girls also at the 6th and 9th grade levels who elected semi-professional occupational goals preferred a *terminal* high school study program, and at the college freshman level were enrolled in *Nursing* and *Business*. Fewer girls at the 6th grade and 9th grade levels who had semi-professional goals preferred a *business* high school study program, and fewer at the college freshman level were registered in an *educational* program.

Clerical and sales

For the males a vocational objective classed as clerical or sales was positively associated with the preference for a *business* secondary school study program at the 9th grade level and with registration in secondary credit and non-credit course groupings at the adult level. There was a negative relationship at the 9th grade level between clerical and *college preparatory scientific*,college preparatory general,and *technical*; and at the adult level with enrollment in *basic elementary*.

Significantly larger proportions of girls aiming toward clerical jobs hoped to enter the business program in secondary school at the 6th grade local and military and 9th grade levels; and at the senior high school level planned on apprenticeship and work. Among the adult women there were more in clerical jobs registered in secondary credit, secondary non-credit and homemaking course groupings.

Fewer females with clerical objectives preferred at the 6th grade local level *college preparatory scientific*; at the 6th grade military *college preparatory scientific*, *college preparatory general*, and *technical* study programs; at the 9th grade *college preparatory scientific*, *college prepatatory general*, *technical* and *terminal*; and at the 12 grade cited plans classed as other. Fewer of the adults who reported they held clerical jobs were enrolled in *basic elementary*, *advanced elementary*, *civic training*, and *naturalization*.

Managerial or official

Of the boys who hoped to become managers or officials of some sort there were significantly larger percentages at the 6th grade local and military and the 9th grade levels who preferred a business high school study program. More proportionately at the 9th grade preferred a terminal high school study program. At the high school senior level, more planned on higher education. More college freshmen were enrolled in Business and Agriculture colleges, as was also true of the managerial aspirant among college seniors.

In the 9th grade group fewer were found in the college preparatory scientific and technical high school study program preferences. Fewer high school seniors planned on apprenticeship and military service. Fewer at the college freshman level registered in Arts and Sciences and Engineering, and fewer at the college senior level registered in Arts and Sciences, Applied Science (Engineering) and Education.

For the female populations fewer than three percent of the levels studied were interested in managerial or official jobs.

Domestic, personal or protective service

Significantly more boys in the 9th grade who preferred a terminal high school study program checked the occupational goal of personal or protective service; of the high school seniors more planned on military service or work. At the other levels proportions of this classification represented numbers too small for analysis.

Fewer males at the 9th grade level preferred the college preparatory scientific program and at the high school senior level planned on further education. Adult men employed in service jobs were less frequently found in the basic elementary and naturalization course groupings.

For the female subjects significantly larger proportions who indicated that they were aiming at domestic, personal or protective service occupations at the 9th grade preferred a technical or terminal high school study program; and at the high school senior level planned on apprenticeship, military service, work or other. The adult education females who were in larger proportion registered in the basic elementary course program grouping reported they were employed as service workers.

Of the females, smaller proportions checking protective service occupational objectives were associated with 6th grade local and military college preparatory scientific high school study program preference; 9th grade college preparatory scientific and college preparatory general high school study programs; and at the 12th grade planned on further education. Proportionately fewer service workers were enrolled in homemaking, adult education and cultural opportunity courses.

Skilled

Of the male populations studied who indicated an occupational preference classified as skilled proportionately more were found among 6th and 9th grade local and military males preferring a technical high school study program; and high school seniors planning on apprenticeship, military service and work. There were fewer 6th grade military males who preferred college preparatory scientific high school study programs who indicated skilled, semi-skilled or unskilled goals. Fewer 9th grade males preferred college preparatory scientific, college preparatory general and business. Fewer high school seniors planned on education. Among the adults, there were fewer craftsmen among students taking naturalization course programs.

Larger proportions of females who indicated a skilled occupational goal classification at the 9th grade level preferred a technical high school study program, and fewer preferred college preparatory scientific and business programs. In the adult education group there were significantly more craftswomen enrolled in basic elementary and advanced elementary course programs and proportionately fewer in homemaking and cultural opportunities.

Semi-skilled and unskilled

Among the relatively small proportion with occupational goals classified as semi-skilled or unskilled at the 9th grade level, proportionately more males had a preference for a technical and terminal high school study program; and at high school senior level more planned on military service and work. In the adult education group about one-fourth of those registered in basic elementary, advanced elementary and naturalization course program groupings considered themselves to be laborers. Proportionately fewer males at the 9th grade level preferred a college preparatory scientific, college preparatory general and business type of study program. At the high school senior level fewer planned on education. Significantly smaller proportions of laborers were enrolled in secondary credit and non-credit, homemaking, and cultural opportunities course programs.

For the female student groups semi-skilled and unskilled educational goals were associated at the 9th grade with terminal and technical study program preferences and at high school senior with plans for work or other. More women were registered in basic elementary of the adult education course programs and fewer in cultural opportunities. Significantly smaller proportions of females at the 9th grade level preferred a college preparatory scientific or a college preparatory general high school study program, and at the 12th grade planned on education.

Other, don't know, no answer

Males who indicated that they did not know or who did not indicate their occupational goals, plus those whose occupational goals could not be classified, were grouped together in this category. At the 9th grade level, more were planning on the college preparatory scientific and college preparatory general study programs and at the high school senior preferred work, military service, work or other. At the college freshman level and also at the senior level more were registered in Arts and Sciences. On the adult level more were enrolled in basic elementary and naturalization course programs.

At the 12th grade level there were fewer males planning on apprenticeship; at the college freshman and senior levels fewer were registered in an Engineering (Applied Science) program; and at the adult education level fewer were found in secondary credit and non-credit and homemaking course programs.

Females who indicated they did not know or who did not indicate their occupational goals, plus those whose goals could not be classified, significantly more often than chance at the 6th grade level among the local group preferred technical and terminal study programs; and among the military group preferred a college preparatory scientific program; at the high school senior level planned on military service, work and other; at the college freshman level were enrolled in Arts and Sciences, Business, and Agriculture; at the college senior level were enrolled in Arts and Sciences and Business; and at the adult were enrolled in a naturalization program.

In this category fewer females at the 9th grade level indicated a preference for a business program; at the 12th grade level there were fewer who planned on further education; at the college freshman level fewer were enrolled in the Education or Nursing programs; at the college senior level there were fewer enrolled in Education curricula; and at the adult level, like the males, there were fewer enrolled in secondary credit and non-credit and homemaking course programs.

Housewife

Females who indicated that becoming a housewife was their occupational goal were found to be significantly represented at the 6th grade local and 9th grade military levels among those preferring technical and terminal high school study programs; at the 6th grade military level among those preferring a technical program; at the 12th grade level among those with other plans; and at the adult level among those registered in a basic elementary program.

Prospective housewives were found significantly less often at the 6th grade military level among girls preferring college preparatory scientific and business programs; at the 9th grade among those preferring college preparatory scientific, college preparatory general, and business programs; at the 12th grade among those planning on further education; and at the adult level among those registered in secondary credit and non-credit and civic training programs.

Certainty of Plan: Items by Levels

For all groups except the adults one or more questions were asked which attempted to measure the certainty with which the respondents perceived their plans. It should be noted that in the case of the college seniors the question was directed at the choice of a vocation.

For the males in the 6th grade groups the respondents in college preparatory scientific from the military district tended to be sure of themselves as did those from the local districts planning on technical programs; and those electing business and terminal study programs from both the district groups were less sure of themselves. At the 9th grade the same pattern was repeated. In the high school senior group those intending to continue education and to enter military service were sure of themselves, those intending to work showed significantly more uncertainty, as did those with other plans. University freshmen who were not sure or completely unsure were significantly more frequently found in Arts and Sciences and were less frequently found in the colleges of Engineering and Education. Those in the college of Education felt more confident in their choice of field of study. At the college senior level, males who were not sure or completely unsure were significantly more frequently found in Arts and Sciences and were less frequently found in colleges of Engineering and Education. Those in the college of Education felt more confident in their choice of field of study. At the college senior level, proportionately more in Arts and Sciences were not sure or completely unsure. Enrollment in the college of Applied Science (Engineering) was associated with high sureness of vocational choice. Students in Business were less likely to be absolutely sure and only a small proportion in Applied Science and Education felt not sure or completely unsure.

For the female respondents in the local 6th grade group uncertainty was associated with preference for the terminal program; in the 9th grade group those electing the college preparatory scientific program more frequently in proportion felt certain about this decision as did those in college preparatory general. The girls who were considering technical and terminal programs significantly more frequently were not sure about this choice. In the high school senior group interest in further education was significantly associated with sureness. Those who were classed in military service, work, or other plan groups showed significantly less confidence in their plans. At the university freshman level enrollment in Arts and Sciences were represented in smaller proportions among those who were absolutely sure of vocational choice. Those in Applied Science (Nursing) were more frequently absolutely sure.

Change in ideas

The inventory What I Want to Do which was administered to the 6th and 9th grade groups, included the question, "How much do you think you will change in your ideas about what you will like to do ten years from now?" For the males in the local 6th grade group there appeared to be little relationship between response to this item and the preferred high school study program. With the military dependent group, however, boys electing the college preparatory scientific study program anticipated significantly less change in ideas about themselves, while those preferring a business program significantly more often expected to change. At the 9th grade level preference for college preparatory scientific program was also associated with absence of anticipated change. A smaller number proportionately of those preferring business and terminal programs thought they would change very little and a smaller number in technical and terminal programs thought they would change somewhat.

For the female groups tested on this item, of the 6th grade military group, proportionately more who preferred the college preparatory scientific program anticipated very little change in their ideas. This was also true at the 9th grade level. In addition, those preferring the college preparatory general were more likely to anticipate less change than those electing the technical, business and terminal secondary study programs.

Discriminating Items

Discussion of the analyses of cross-tabulations by rows is completed here with a summary of the most discriminating determinant items. (Appendix II)

Arbitrarily an item was defined as discriminating when the probabilities of

Table 26
Salient Determinants--
Sixth Grade Local Group Secondary Programs

College Scientific	College General	Technical	Business	Terminal
		Psychological Determinants		
			security, f	fastest path, f
			income, m	parenthood, m
			people in field, f	movies, TV, m
science, f			adults, m	children, youth, m
(music, m)		food, f	(plants, animals, m)	music, m
		(numbers, f)		art, f
		(words, f)		plants, animals, f
				other interests, f
		Sociological Determinants		
(Filipino, m)				Filipino, m
				Hawaiian, f
prof. semi-prof father, f		managerial father, m		
(semi-skilled father,f)		semi-skilled, unskilled father, f	clerical father, m	
		Occupational Goal		
	professional, f	skilled, m	managerial, m	semi-prof, f
(dom. pers. protect. service, f)		other, f	clerical, f	housewife, f
(clerical, f)		housewife, f		other, f
		Certainty		
		sure, m	not sure, don't know, m	not sure, don't know, m,f

Legend: m--males; f--females
( ) --Bracketed determinant is salient and underrepresented in this cell.

Table 26 (cont)
Salient Determinants--
Sixth Grade Military Group Secondary Programs

College Scientific	College General	Technical	Business	Terminal
		Psychological Determinants		
serve others, f		parenthood, f	income, f security, f (serve others, f)	
classes, f hobby, f (random choice, f)			(hobby, f)	career day, m (people in field, m)
science, f plants, animals, f other interests, f (plants, animals, m) (food, m, f)	adults, m music, m art, m	plants, animals, m food, m	words, f (science, f)	music, m plants, animals, m
		Sociological Determinants		
(Filipino, m)		(Japanese, f)		Filipino, m other national, f
4th generation, f	(3rd generation, f)	(3rd generation, f)		
prof, semi-prof father, f (skilled father, f) (unskilled father, m)		(clerical father, f)	managerial father, m clerical father, m skilled father, m (prof & semi-prof father, f)	semi-skilled father, f
		Occupational Goal		
professional, m, f (dom, pers, prot serv, f) (housewife, f) (clerical, f) (skilled, semi & unskilled, m) (other, f)	(clerical, f)	housewife, f skilled, semi-skilled & unskilled, m (clerical, f)	managerial, m clerical, f (housewife, f) (semi-prof, f)	semi-prof, m (professional, m)
		Certainty		
v. little chnge, f (not sure, m)	not sure, m		v. much chnge, m not sure, dk, m (no change, m)	not sure, dk, m

Table 26 (cont)
Salient Determinants--
Ninth Grade Secondary Programs

College Scientific	College General	Technical	Business	Terminal
		Psychological Determinants		
prestige, m		parenthood, f		fastest path, m, f
serve others, f (fastest path, m, f) (easy courses, m, f)		fastest path, f easy courses, f (security, f)		easy courses, m, f (satisfaction, m, f)
classes, m tests, m counselor, m		career day, f		
science, m, f numbers, m, f plants, f	children, youth, m art, f (machines, f)	art, f food, f	machines, f adults, m words, m, f (science, f) (plants, f) (art, f)	children, youth, m music, m, f food, m, f (science, m, f)
		Sociological Determinants		
(Filipino, m) (Hawaiian, m) (Cosmopolitan, m)		Hawaiian, f Cosmopolitan, f	don't know nat-ethnic, m, f	Hawaiian, m, f Cosmopolitan, m, f other national, m (Japanese, m, f)
3rd generation, m 4th generation, f				(3rd generation, f)
prof father, f	prof father, f		(prof father, m, f)	semi-skilled father, m unskilled father, m, f (prof. father, f)
		Occupational Goal		
professional, m, f (managerial, m) (dom, prot, pers ser,f) (skilled, m, f) (semi-skilled, m, f) (housewife, f) (clerical, sales, m, f)	professional, f semi-skilled, f no answer, dk, m (clerical, f)	dom, prot, pers serv, f skilled, m semi-skilled, m, f housewife, f (prof, m) (clerical, m, f)	clerical, m, f managerial, m (other, dk, na, f) (prof, f) (skilled, f)	semi-prof, m, f dom, prot, pers serv, m, f semi-skilled, m, f unskilled, m, f housewife, f (prof, m) (clerical, f)

Table 26 (cont)
Salient Determinants--
Twelfth Grade Plans

Further Education	Apprenticeship	Military Service	Work	Other Plans
		Psychological Determinants		
		other reasons, f (income, m, f) (specialization, f) (parenthood, f) (security, f)	easiest thing, m	easiest thing, m, f parenthood, m (specialization, m, f) (prestige, f)
(random choice, m)		ROTC, m career day, f (classes, f) (teacher, f)	random choice, f	random choice, m (classes, m) (hobby, m)
science, m	(science, m)	music, f (children, f)	food, m, f (science, m, f)	food, m, f (numbers, m) (machines, f)
		Sociological Determinants		
	Filipino, f don't know national, f (Chinese, f)	Filipino, f Hawaiian, f other national, f (Japanese, f)	Hawaiian, f Cosmopolitan, f other national, m, f	Filipino, f Hawaiian, m, f Cosmopolitan, m, f other national, f (Japanese, f)
		(3rd generation, f)		(3rd generation, m, f)
	semi-skilled father, f	semi-skilled father, f (managerial father, f)	unskilled father, f	semi-skilled father, m, f unskilled father, f (managerial father, f)
		Occupational Goal		
professional, m (semi-skilled, m) (dom, prot, pers serv, m)	dom, prot & pers serv, f skilled, m (managerial, m) (professional, m)	dom, prot, & pers serv, m, f semi-skilled, m other, don't know, f (professional, m, f)	dom, prot, pers serv, m, f semi-skilled, m, f (professional, m, f)	dom, prot, pers serv, f semi-skilled, unskilled, f other, don't know, m, f housewife, f (professional, m, f)

Table 26 (cont)
Salient Determinants
University of Hawaii Freshman Colleges

Arts & Sciences	Engineering	Nursing	Education	Agriculture	Business
			Psychological Determinants		
(security, f)		serve others, f	serve others, m (advancement, f) (income, m) (prestige, m)	self-improve, f practical, f	serve others, f aptitude, f (independence, m)
college courses,f other influences,m	hobby, m (free time, m) (other infl, m)	other infl, f (parents, f) (hobby, f)	teachers, m free time, m	experience, m hobby, f (high school courses, m)	high school courses, f (hobby, m)
art, m (numbers, m)	machines, m numbers, m (children,youth,m) (adults, m) (words, m) (plants,animals,m) (other interests, m)	science, f adults, f Plants,animals,f (words, f) (music, f)	children,youth,m (science, m) (numbers, m) (plants,animals,m) (machines, m) (other interest, f)	plants,animals,m (numbers, m) (words, f) other interests,f	adults, m, f numbers, f children, youth, m, f science, m, f (art, m) (plants, animals, m) other interests, f
			Sociological Determinants		
Caucasian, f			(Caucasian, f)	other national,m	Chinese, f
5th generation,f				semi-skilled father, m unskilled father,m (skilled father, f)	
			Occupational Goal		
other, m, f don't know, f (managerial, m)	professional, m (other, dk, m) (managerial, m) (don't know, f)	semi-prof, f (don't know, f)	semi-prof, f (other, f) (don't know, m, f)	managerial, m other, f (prof, m)	managerial, m semi-prof, f other, f (prof, m)

Table 26 (cont)
Salient Determinants--
University of Hawaii Senior Colleges

Arts & Sciences	Applied Science	Education	Business Administration	Agriculture
		Psychological Determinants		
other values, m (advancement, m) (income, m) (security, m, f)	security, m other values, f advancement, m, f income, m specialization, f (serve others, m)	serve others, m security, m (income, m)	advancement, f (security, m) (serve others, f)	advancement, f practicality, f
college courses, m, f instructor, m, f (parents, f) (work experience, f) (relatives, m, f)	h. s. classes, m other influences, f tests, f hobby, m (free time act, m) (college courses, m,f) (parents, f) (instructor, m)	parents, f teacher, m relatives, m free time act, m	work experience, m (hobby, f, m)	hobby, m, f
ideas, f (numbers, m) (machines, m)	numbers, m science, m, f (adults, m) (children, m) machines, m (other interests, m)	children, m music, m (numbers, m) (machines, m)	adults, m, f numbers, f (science, m) (children, m, f) (machines, m)	science, m plants, animals, m other interests, f
		Sociological Determinants		
Caucasian, m, f prof, & semi-prof father,f			managerial father, f	
		Occupational Goal		
(managerial, m) other, don't know, m, f	(managerial, m) (other, don't know,m)	(managerial, m) (don't know, f)	managerial, m other, don't know, f	managerial, m (professional, m)

Table 26 (cont)
Salient Determinants--
Adult Course Groupings

Basic Elementary	Advanced Elementary	Secondary Credit	Secondary Non-credit
		Psychological Determinants	
English, m, f	English, m, f	fastest path, m, f	security, f
learn USA, m, f	learn USA, m, f	security, f	advancement, f
easy courses, f	advancement, f	advancement, m, f	practicality, m
aptitude, m, f	independence, m, f	income, f	
independence, m, f	fastest path, f	specialization, m, f	
prestige, m, f	family living, m	(family living, m, f)	
family living, m, f	security, f	(citizenship, m, f)	
	(citizenship, m)	(learn USA, [illegible], f)	
	(practicality, m, f)	(English, f)	
teacher, m, f	classes, f	classes, f	work experience, m, f
relatives, m, f	relatives, m	counselor, m, f	counselor, f
random choice, m, f	(hobby, f)	work experience, f	(teacher, m)
spouse, f		(hobby, m, f)	(hobby, f)
(free time act, m, f)		(random choice, m)	
(classes, m, f)			
words, m, f	science, f	science, m	science, m
(science, m, f)	adults, f	numbers, m, f	numbers, f
(arts, f)	machinery, m	(plants, animals, f)	
(other interests, f)	music, f	(food, m)	
	words, m, f		
	(numbers, m)		
	(other interests,f)		
		Sociological Determinants	
Filipino, m	Filipino, f	Hawaiian, f	Hawaiian, f
(Caucasian, m, f)	(Caucasian, m, f)	(Filipino, m)	(Filipino, m)
(Hawaiian, m, f)			
(other national, m)			
		Occupation	
farmer, m	laborer, m	other, f	other, f
laborer, m, f	craftsman, f	service worker, m	service worker, m
craftsman, f	(professional, m)	clerical, f	clerical, f
don't know, na, m	(clerical, f)	(farmer, m)	(farmer, m)
(clerical, m, f)		(laborer, m)	(laborer, m)
(professional, m, f)		(don't know, no answer, m,f)	(don't know, no answer, m,f)

Table 26 (cont)
Adults (cont)

Civic Training	Homemaking	Naturalization	Cultural Opportunities
	Psychological Determinants		
satisfaction, m	serve others, m	learn USA, m, f	other reasons, f
self-improvement, f	income, m	citizenship, m, f	satisfaction, m, f
(independence, f)	practicality, m	(satisfaction, m, f)	(security, m)
(family living, f)	(advancement, m, f)	(advancement, m)	(learn USA, m, f)
(English, m, f)	(fastest path, m, f)	(income, m)	(citizenship, m, f)
(security, f)	(citizenship, m, f)	(specialization, m, f)	(English, m, f)
(learn USA, f)	(security, m, f)	(practicality, m, f)	(serve others, m, f)
(citizenship, f)	(learn USA, m, f)	(fastest path, m, f)	(advancement, m, f)
	(other reasons, m, f)	(other reasons, m, f)	(income, m, f)
	(English, m, f)		(specialization, m, f)
			(practicality, f)
			(independence, m, f)
			(fastest path, m)
			(family living, m, f)
work experience, f	hobby, m, f	spouse, f	free time act, m, f
(relatives, f)	(classes, m, f)	Teacher, m	spouse, m
(spouse, f)	(teacher, m, f)	(work experience, f)	hobby, f
	(counselor, m, f)	(hobby, f)	(classes, m)
	(random choice, f)	(classes, m)	(teacher, m)
			(work experience, m, f)
			(counselor, m)
			(random choice, f)
children, f	plants, animals, f	plants, animals, m	music, m, f
science, f	food, f	(numbers, m, f)	art, m, f
ideas, m, f	other interests, f	(science, m)	(words, m, f)
(numbers, m, f)	(science, m)	(machinery, m)	(numbers, m, f)
(words, f)	(numbers, m, f)		(adults, m)
	(music, m, f)		(machinery, f)
	(words, m, f)		
	Sociological Determinants		
Chinese, f	Caucasian, f	Filipino, m, f	Caucasian, m, f
Hawaiian, f	Filipino, m	(Chinese, m)	(Filipino, m)
(Caucasian, f)	Hawaiian, f	(Hawaiian, m, f)	(Chinese, f)
		(Caucasian, m)	(Japanese, f)
			(other national, f)

Table 26 (cont)
Adults (cont)

Civic Training	Homemaking	Naturalization	Cultural Opportunities
	Occupation		
professional, m, f	laborer, m	laborer, m	professional, m, f
(housewife, f)	clerical, f	farmer, m	(dom, pers, prot serv, f)
(clerical, f)	professional, m	don't know, na, m, f	(laborer, m, f)
	(craftsman, f)	(craftsman, m)	(craftsman, f)
	(don't know, no answer, f)	(professional, m, f)	

occurrence differed significantly from chance expectations in more than seventy percent of rows analyzed. Discriminating value items were security, service to others, advancement, and prospective income. Hobby and free time activities were discriminating external influences. Interests included children and youth, science, numbers, music, machines, words, plants and animals, and food.

Of the sociological determinants, Filipino, Hawaiian, and Japanese ancestry were the only discriminating items. Occupational goals classed as professional; clerical; skilled; semi-skilled and unskilled; and housewife discriminated. The item don't know or no answer in response to a question about occupational objective also was discriminating. The extremes of certainty (sure of plans, no change expected, or not sure, completely unsure, don't know) were discriminating.

Salient Determinants by Educational-Vocational Choices

In the preceding sections we summarized all determinant items for each of the seven male and seven female educational level populations which were salient or significant in discriminating between the broad educational choices we had selected for within group analysis. In this section we have summarized the same data by programs for the salient determinant items. In other words, the first part of this chapter represented an analysis of contingency tables by rows. Table 26 summarizes analyses of the same cross-tabulations by columns.

The following example illustrates how Table 26 may be read. Within the 6th grade local group, the percentages of boys responding to each item who elected a college preparatory scientific secondary school program were compared with percentages of all boys, and the item distributions of girls anticipating a science program similarly were compared with item distributions of all 6th grade local girls. (See Appendix II.) For the girls a salient interest in science and for the boys a salient lack of interest in music were the only psychological determinants associated with a science program choice. There were substantially fewer Filipinos than expected among the boys, fewer fathers in semi-skilled occupations among the girls. Professional and semi-professional fathers were markedly overrepresented in the female subjects. Fewer than half as many girls in proportion as would be expected by chance checked occupational goals classed as domestic, personal and protective service and clerical.

None of these seven determinants were salient in the same direction within the four other secondary program options at the 6th grade local level. However, at the 6th grade military and 9th grade levels, the items "science" and "professional and semi-professional father" were also positively associated for female subjects with a college scientific secondary program; the items "Filipino" for male subjects and "domestic, personal, or protective service" occupational goal for female subjects were negatively associated.

Program Distributions

For each program distribution in all contingency tables the probability was computed that it differed from what would be expected on the basis of the distribution of the total sub-population among the various determinant items. As summarized in Table 27 and Appendix II, it was thus possible to compare the determinants in their power to discriminate between programs (columns) at various educational levels. For example, out of 76 program distributions of responses to value items, 55 (72 percent) differed significantly from expectations. At the 6th grade levels only 20 percent of the preferred secondary school study program distributions differed significantly; at the 9th grade level 90 percent; and at the 12th grade level 80 percent of distributions by plan. At the college freshman and also senior levels 90 percent of the distributions by colleges differed significantly. At the adult level of 16 course groupings examined all differed significantly in the proportions checking the various value determinants.

When the distributions of external influence items were similarly analyzed

Table 27

Program Distributions Differing Significantly From Expectations by Determinants at Various Educational Levels - (Percentages)[a]

Determinant	Educational Level							Total
	Local 6th Grade	Military 6th Grade	9th Grade	12th Grade	College Freshman	College Senior	Adult	
Values	---	40	90	80	90	90	100	72
Influences	20	30	100	100	100	80	88	75
Interests	80	80	100	90	100	100	94	92
National-ethnic	30	30	90	100	40	30	93	64
Generation	---	30	90	100	30	---	---[d]	42
Father's Occupation	10	40	80	100	30	---	---[d]	39
Occupational Goal	80	80	100	100	100	80	100	91
Certainty	10	20	70	80	60	40	---[d]	47
Expected Change	---	30	80	---[d]	---[d]	---[d]	---[d]	37
N of Distributions =	10	10	10	10	10	10	14-16[b]	30-76[c]

---

[a] Each cell represents ratio of significant distributions to total of programs at that level for males and females.

[b] In the adult group there were 16 distributions for values, interests, and influences. Information on generation and father's occupation was not obtained.

[c] See Appendix II for number of column items of each determinant.

[d] Item omitted from this survey.

75 percent were significantly different from expectations. At the 6th grade levels 25 percent of the distributions were significant; otherwise almost all chi squares at all levels for all columns attained significance.

For over 90 percent of the educational-vocational choices presented to the 14 male and female sub-populations the obtained distribution of interests differed significantly from the expected distribution ($p < .05$).

Of 74 national-ethnic distributions by program 47 were significant. There were fewer significant relationships in the 6th grade and college groups.

Twenty-seven of 70 distributions by occupation of father were significant, of which 18 were at the 9th and 12th grade levels. Two college senior classes but no adults were sampled on this determinant. Similarly for generation in the United States 19 of the 25 significant distributions were found at the 9th and 12th grades.

Ninety-one percent of the obtained distributions by occupational goal classifications were significantly unlike expected distributions. Of 28 significant distributions of items measuring certainty of choice, 7 were found at the 9th grade, 8 at the 12th grade, and 6 at college freshman levels.

Chapter V

DISCUSSION

These investigations were initiated to explore some of the reasons for educational choices; it was hypothesized that values would play an important role in these decisions. In developing questionnaires for application to six educational levels within the state of Hawaii, the project team measured the educational and vocational choices of students, their reasons for their proximate and broad educational plans, and some of the socio-economic characteristics of these students. In Chapters III and IV continuities of determinants across educational levels, the extent of association between determinants and certain educational programs, and significant and salient patterns by sex were considered. In this chapter the distinctive characteristics of each of our sub-populations will be interpreted. The findings about each of the determinants and their relative importance to educational choice; the related problems of development, maturity, and readiness will be the subject of speculation. Certain major implications for counseling and guidance and for curriculum planning will be suggested. The results will be fitted into a theoretical framework of choice behavior; and possible studies which might use the findings as a foundation will be recommended.

Distinctive Characteristics of Six Populations

In treating data for this report thus far continuities and patterns across levels have been emphasized. In contrast, six supplementary summary reports described some of the distinctive characteristics of each of the educational level populations. It is desirable to review briefly here the most distinctive characteristics of each of the six educational level populations and the specific choices available to them. It is especially important to realize that in a cross-sectional design there may be a variety of possible explanations for differences, explanations which may differ from level to level. These explanations may be tested out in subsequent studies.

6th grade

The 6th grade public school children were asked to predict the choice they would make in three and a half years among five possible secondary school programs. How many will actually consummate their choices is a problem for eventual follow-up. The socio-economic attributes of these 10 and 11 year olds were considered diverse in range, comparable to available census figures for this age group but not for the total population of the state. Approximately one in four was the child of a civilian or uniformed member of the armed forces. One school district in which more than half the pupils were military dependents was identified and later analyzed separately.

More than one third indicated occupation objectives classed as professional. Glamor job titles predominated such as, for the boys, baseball player, football player, and pilot, for the girls, stewardess, dancer, singer, and actress. Compared to the other educational levels 6th graders made significantly more unrealistic choices. Two thirds of the girls and one half of the boys planned on college after high school, including a majority of the children who elected a non-college program for secondary school. From small samples, it was found that 6th graders as individuals tended to be inconsistent about their plans in interviews and in responding to the same questionnaire items from one week to the next. It was concluded that many of these children were not prepared to make sensible plans.

The most popular values were opportunity for advancement, satisfaction from field, and chance to serve others. The boys seemed to be more opportunistic, the girls tended to stress altruistic reasons. The strongest single reported external influence was parents. The boys more frequently indicated that an interest in work with science and with machines contributed to their choice of a high school study program, the girls work with words. Numbers were popular with both sexes. Even though these children were judged to lack readiness for educational decision making, the hierarchies of determinants were fairly similar to other educational levels.

9th grade

The 9th grade pupils were surveyed within a few months of entering one of the five secondary school programs; this sample, in contrast to the 6th grade population, could be considered representative of the public school enrollment throughout the state. Perhaps because of family transiency, selective factors in choice of a public rather than a private school and classification differences, there were proportionately fewer Caucasians and Hawaiians than indicated by available census figures for the state as a whole. There were more children of semi-skilled workers.

Although the 9th graders indicated fewer glamorous occupational preferences, as in the 6th grade the proportion of these young people who hoped to enter high status fields far exceeded estimated national and local demands. About 7 of every 10 hoped for more school after high school graduation. Four of 10 were considering one of the college preparatory programs in high school. About one in five felt very uncertain about his program choice. Although unquestionably further research is needed, the 9th grade in Hawaii appears to be an important period for educational guidance services. Perhaps stress should be placed less upon college and occupation, especially upon specific decisions, and more upon laying the groundwork for selection of an appropriate secondary school program. Research now in progress indicates that 10th grade public school pupils in many cases felt they were assigned to programs mechanically by teachers or parents.

Values of satisfaction, practicality and advancement were popular determinants of program choice; like the 6th graders, parents most frequently influenced both sexes followed by aptitude and interest tests. In view of their apparent importance the impact of these tests merits further investigation. How well did these adolescents understand their implications?

Like the 6th graders, the interest determinants of the sexes were dissimilar; males most frequently hoped to study in a program which offered work with machines and girls with words. But more often than the younger group ideas were checked as a determining influence by both sexes. Did this finding represent an awakening interest in cognitive development?

12th grade

The 12th grade sample included both public and private school students representative of the entire state. They were asked in April what they planned to do after graduation. The five plan groupings--further education, apprenticeship, military service, work and other--had a logical relationship to the 9th and college choices but were far from comparable.

In their socio-economic characteristics the 12th graders were quite similar to the 9th grade population except that there were more children and grandchildren of immigrants and more children of managers and officials and of skilled workers. These differences may be a function of within group variations in attrition, family finances, parental age and sampling among other possible selective factors.

As at the 9th grade level, one third listed occupational aspirations classified as professional, aspirations which again exceeded national needs. On the other hand their choices were consistent with trends in manpower shortages; engineering for the young men and teaching for the young women were the most popular goals.

In view of the popularity of further education it seems consistent that an interest in ideas was checked by more than 4 in every 10 as a determining influence.

The value, interest, and external influence determinants may be modifying to fit new life circumstances. With increased maturity and forced adult plan choices, there seemed to follow an increase in the importance of independence. Similarly a drop in the influence of parents may have reflected psychological weaning. Stress on aptitude, advancement, self-improvement and tests may represent a common sense or reality factor.

One of the striking characteristics of the Hawaii high school seniors in comparison with continental samples was a greater commitment to further education, including college, and a slightly greater commitment by girls than boys. Thus, 46 percent of girls and 40 percent of boys sampled planned on college. Comparable figures from Washington, (Slocum, 1958) Minnesota, (Berdie, 1954) and Wisconsin (Little, 1958) as well as in a nation-wide sample (Educational Testing Service, 1957) fall within the 35 to 40 percent range with slightly more boys than girls looking forward to college.

These comparative figures assume even more significance when it is pointed out that the Hawaii public school groups, especially on the neighbour islands, tended to have proportionately fewer individuals in the upper third of national norms on such measures of ability and achievement as the CTMM, DATB, and CAT (Department of Public Instruction, Division of Research and Statistics, 1960). Perhaps more of a problem in Hawaii than talent loss is the related question of inappropriate level of aspiration.

Inappropriate choice of position may also be a problem. If the Educational Testing Service nation-wide survey may be used as a rough comparison, even though its 35,000 twelfth grade respondents were all enrolled in public schools, much larger proportions of Hawaii public and private school seniors, especially girls, planned to enter a program in teacher education and fewer proposed to major in humanities or science. From interviews and observation, we suspect that the high status traditionally accorded to the teacher by Oriental groups, the need for two incomes to sustain the average family in Hawaii, plus the push toward upward mobility within lower class immigrant groups may account in some part for the popularity of education as a field of specialization.

University freshman

Such selective factors as high school achievement, general ability, family finances and motivation help to account for the distinctive characteristics of the university freshman sample. These entering students had been asked during the very act of enrollment about their choice of a college or curriculum and then were compared by undergraduate colleges.

The overrepresentation of students of Japanese and Chinese ancestry and marked underrepresentation of Filipino and Hawaiian ethnic groups are assumed to reflect economic factors as well as attitudes about higher education derived from cultural conditions. For example, the teacher has had high prestige for centuries in the Orient but in primitive Polynesia formal education was scarcely known. The distribution of father's occupational classification was consistent with findings on mainland state university campuses as was the classification of occupational preferences. The interraction of these socio-economic factors is probably complex.

Once the entering students had gone through the successive sieves of the university general admission requirements and acceptance in certain selected programs (nursing, engineering, education, etc.), the distributions of educational and vocational objectives appeared to be reasonably consistent with national and local economic demands. The most popular fields, teaching for girls, engineering for boys, again were those in which there was a continuing shortage.

Like the 12th graders, both men and women, especially the women, placed the highest emphasis on satisfaction from the field of study. The rise in importance of security of employment compared to lower educational levels presumably represents the frequently recognized economic motivation for college attendance. The fact that the women wished to have a chance to serve others was consistent with the popular objective of teaching.

Aptitude and interest tests, checked by 37 percent of the men and 40 percent of the women, as with the 12th grade students, was the most frequently cited external influence item. It seems logical in view of the choices to be made that high school courses and high school teachers along with parents were checked as influential by more than one out of every four freshmen.

Reported specific determining interests were somewhat more positively associated between males and females at this level of education (rho = 0.40). More college girls, over half of the respondents, checked children and youth and more of the men (over one third) checked science. These findings are consistent with the popularity of education and engineering. After checking on the stability of the educational decision-making process by repeating our questionnaire on small samples of the freshmen and by obtaining structural interviews, the project team feels quite confident in stressing the obvious but important conclusion that perhaps half the incoming University of Hawaii students had relatively little information about the choices open to them in education and had vaguely formed value systems. Many of them expressed distress by indicating a desire to talk things over with an adult or to receive help in selecting a major or a career.

The data of the 1959 university freshman were substantiated in terms of psychological determinant hierarchies by the survey results for the 1958 and 1960 students. The fact that the 1958 group was not entirely similar in its socio-economic characteristics suggested that the university student population was changing dynamically, perhaps as a part of the transition to statehood. The item, 'interest in ideas' was inadvertently omitted from the 1959 survey but was first in popularity for the 1958 males and second for the 1958 females, perhaps a heartening finding for professors.

University seniors

It will be recalled that the senior sample was taken during the spring 1959 registration, that determinants were obtained retrospectively in relation to choice of a curriculum, and then eventually were analyzed by colleges. The inference that the university's student body is changing in its socio-economic characteristics was further confirmed by comparisons with the 1959 freshmen. There were more students of Japanese and Chinese ancestry, and fewer of Caucasian ancestry than census proportions and also than the other levels. Almost 9 out of 10 of those who reported their generation were the children or grandchildren of immigrants or were foreign students, fewer were the children of professional, semi-professional workers and more of unskilled workers. We can account for these findings partly as a function of the changing nature of the university, which appeared to be moving rapidly from a small "motorbus" school to a medium sized cosmopolitan institution, with a student body not only from Honolulu and neighboring areas but also from many foreign countries as well as the continent. Undoubtedly selective processes in terms of a decision to transfer to mainland schools after a year or two at the University, dismissal for academic reasons, and the changing nature of the population of the state as a whole also contributed to socio-economic differences between senior and freshmen groups.

When compared in rank order of overall preference the senior class of 1959 was similar to the 1958 group in reported specific interests and in general values more than in external influences and in curricula choices.[1] On the other hand in terms of the consistency of significant differences between class groups in 1958 and 1959 for the determinant items, 5 out of 10 specific interests were reversed whereas only 4 of 20 educational specializations and only 1 value and 1 external influence changed directions from one year to the next.

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[1] This section was adapted from a paper presented to the America Personnel and Guidance Association by Dole, Will, and Iwakami, (1960).

Consistent and statistically significant differences in both 1958 and 1959 between the seniors and freshmen were as follows: The seniors prized satisfaction from field and practicality of subject more than the freshmen. Security of employment, chance to serve others, opportunity for advancement, aptitude, potential income, preparation for specialization, independence and prestige were more popular with freshmen in both samples. The seniors were more influenced by work experience and, as seems logical, by college courses. They were less influenced by high school courses, parents and aptitude and interests tests, high school teacher, high school counselor and relatives. They were significantly less interested in machinery.

Encouraging to those concerned about student personnel services, there was an increase in the senior population in certainty about post-college plans and a drop in the proportion indicating a desire for various sorts of guidance services. On the other hand, there is the possibility that certainty of plan and independence of counseling were related to academic survival.

Let us assume that these findings would be true if we followed the same group through the undergraduate years. Have we here an illustration of what Super calls "implementing a self concept?" If, for the group at least, general values were most constant, then perhaps the adolescent by the time he reaches college age has already developed a permanent self-concept. He has a pretty good notion of what is important for him. In the process of reality testing, his choice may change to some extent. The intensity of his interest is modified by the immediate experiences which permit him to try out this concept--through courses, work experience, and perhaps knowledge of test results. However we must caution ourselves that these speculations are derived from group--not individual comparisons.

Adult

The adult group was selected for study in part because it was hypothesized that mature persons enrolled in evening community classes would differ markedly from the other educational levels. As predicted the group was far more heterogenous in chronological age, and years of school completed. This was the only group in which the proportions of females to males, was unequal; there were approximately two women students to every man. This diversity extended also to social characteristics. However, relative to their respective proportions in the total Hawaii population, persons classified as Chinese and Japanese were substantially overrepresented in the adult student population and persons classified as Hawaiian or part Hawaiian were substantially underrepresented. Unlike the other groups, the majority of participants were married. Contradicting the conception that adult education had the most appeal to those of low educational achievement, over two thirds of the students reported completion of some high school or higher training up to more than four years of college. The majority of participants were employed; however, over half of female participants were classified as housewives. Although the appeal of adult education extended to all occupational levels there were proportionately more in unskilled occupations than the fathers of the other educational levels sampled in these surveys. The adult program attracted many persons who were newcomers to Hawaii. Information on length of residence was not obtained from the other populations.

Although they had a great variety of reasons for attending classes, the single most dominant reason appeared to be what the participants thought of as "self-improvement." Male participants were often influenced by their work experience while female participants tended more often to be influenced by family and friends. Many reasons were specific to this level and frequently were volunteered by the participants. For example, one "other" influence upon enrollment was newspaper advertising, another the availability of transportation. Because the determinants were specific, perhaps because of deficiencies for some subjects in reading skills as well as the inappropriateness of many of the psychological determinants for the adult group, of the six groups the adults checked fewer of the 35 determinant items which were presented to all populations.

Determinants of Educational Choice

Patterns of determinants

In Chapter IV we described for each determinant item the educational-vocational plan groupings with which the various subject populations were significantly or saliently associated and identified the salient item determinants of each program at each educational level. A separate and detailed discussion of these patterns would require disproportionate space in this report. Tentative explanations for each significant or salient finding would necessitate consideration of the distinctive characteristics of the sub population sampled, the width and consistency of subordinate choices implicit within each plan, program, college or course, as well as other specific knowledge much of it local and transient in character.

These patterns seem best considered as supplementing and extending discussion of the major findings presented in Chapter III. Although many specific patterns may be of interest to those who are concerned with populations similar to those studied in Hawaii, their greatest value perhaps may be in suggesting avenues for further investigation. We are now in a better position to identify the variables which must be controlled, statistically or experimentally, whether in cross-sectional or longitudinal designs, if we wish to generalize more confidently about the determinants of educational-vocational choices.

The identification of hundreds of patterns overwhelmingly confirms the general-

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ization that the determinants of educational choice are multiple and complex. Nor does educational choice itself involve a unitary, fixed decision. As has been pointed out, the individual makes choices within a sequence of educational positions. In this study each sub-population was asked about positions which were proximate in time and broad in compass. If distant and specific positions had been selected for study--e.g. 6th graders' intentions of entering Harvard Medical School to study surgery, we suspect the results would have been different.

Granted then that to an extent the operation of each determinant is a function of the nature of the educational position, sex affiliation, vocational goals, and certainty were significantly associated with choice, as were the sociological determinants of national-ethnic origin, father's occupation, and to some extent generation in the United States. For each of these determinants, how can the findings be interpreted?

Sex

The decision to treat the sexes separately in this report was based on a preliminary study (Dole and Iwakami, 1960b, of subgroups at various educational levels which were quite diverse in their socio-economic characteristics. The males and females were found to differ in their educational and vocational plans and were similar in value and influence hierarchies but not interest. Thirteen of the check list determinants were consistently associated with sex affiliation. The present research, with larger N's, and with four of the six educational level groups different from the first sample, supported the preliminary findings.

In making educational choices, conceived of as preceding and preparing for the choice of life activities (work, homemaking), the female has a different conception of what is available to her than does the male in our society. With few exceptions, educational programs differed greatly in perceived suitability by the sexes. However, the hierarchy of personal values and of external influences, which the individual reported as determining his choice, was relatively more independent of sex role at all educational levels. In contrast, the hierarchy of specific interests which was associated with various educational programs seemed to be more dependent on sex role, particularly in the unspecialized groups. This is, of course, supportive of the established practice in vocational guidance of norming interest inventories separately for the sexes.

Considered in an absolute sense, determinants such as opportunities for advancement, income and a chance to work with machinery, science, and growing things had higher valence for male groups. In contrast, when choosing her educational program the female prized more highly satisfaction, the chance to serve others, self improvement, and practicality of subject; she hoped to work with children and youth, food, and words and felt more influenced by others (friends, teachers, parents). By and large these differences in the popularity of educational determinants were consistent with expected adult sex roles in which the male is the provider and the woman the homemaker.

Generalizing from both the preliminary study and the present data, it seems probable that other personal and social variables may also have been interacting with sex affiliation. For example, freshman coeds from the University of Hawaii Hilo campus on the island of Hawaii were found in the preliminary study to place exceptionally strong emphasis on security of employment. At the time of the survey Hawaii was recovering from a sugar strike. Thus socio-economic factors may influence educational choice differentially.

Occupational objectives

Whether primarily because of the nature of the American social structure or the phrasing of the question to stress desire rather than expectation ("What occupation do you hope eventually to enter?"), the distribution of occupational goals for the 6th, 9th, and 12th grade populations as on surveys in other parts of the country

(See Hutson, 1958, for a critical commentary) were considerably out of line with social need. Three or four times as many of the public school young people listed professional fields in proportion than there are employed adults in Hawaii; relatively fewer looked toward semi-skilled and unskilled jobs. Hawaii college students, however, listed vocational objectives more closely in line with national supply and demand (Dole, Iwakami, and Will, 1960). Since occupational objectives were substantially associated with educational choice, it follows that the educational choices of 6th, 9th, and 12th grade students were probably to a considerable extent based also on unrealistic perceptions of self and society.

From another point of view the finding of median correlations of 0.54 for males and 0.50 for females between occupational objectives and educational objectives is partial evidence that in Hawaii at all levels the push for upward mobility as a function of socio-economic forces probably underlies educational choice. Items which seemed to reflect class differences in vocational aspiration were found to discriminate consistently between educational-vocational position choices. Furthermore, since these relationships were far less than one to one, educational position choices as we have measured them emerge at each level as decisions to be investigated separately. Educational choice as was stated in Chapter I can not justifiably be treated as synonymous with vocational choice, although both are quite apparently interrelated products of somewhat similar social forces, and many educational choices are more or less instrumental to the attainment of occupational objectives.

Certainty of choice

If we assume that certainty of plan is a reasonable index of the degree of commitment to a proposed course of action and that very high certainty may often represent immature rigidity and extreme uncertainty immature confusion, then we may rather hesitantly suspect that **maturity** increased with educational level. However, without knowledge of each specific individual who indicated his degree of commitment to a specific proposed course of action, it is difficult to evaluate these responses confidently.

The consistent significant relationship between certainty and choice for all populations sampled, with the exception of the 6th grade military female group, provokes problems for further study. We wonder about implications for guidance services, and curriculum planning. Do present practices perhaps create or mitigate uncertainty? Are choices of certain plans and programs associated with personality variables such as rigidity and anxiety, as well as with emotional maturity? What about social class and family influences?

Sociological determinants

In asking the respondents to indicate national-ethnic background, generation in the United States, and father's occupation, self-classifications were collected on demographic characteristics. Comparisons with data in which subjects are classified by an investigator according to some standard system such as the U. S. Census should be made cautiously. As indicated in more detail in the separate supplementary reports for each level, when such comparisons were made, none of the six populations was found to be representative of the total 1950 census population of the state. The 9th and 12th grade groups, however, were similar to age norms.

Earlier in this chapter it was seen that the six sample populations differed from one another in socio-economic attributes. A variety of factors may have contributed to these differences: 1. For 6th, 9th, and 12th grade populations on demographic items, there were a larger number of don't knows, no answers and others not only because of the immaturity of the younger subjects but also because of differences in administrative procedures, 2. Since there are disproportionately more young, single Caucasian and Filipino adults in the Hawaii general population (U. S. Bureau of the Census, 1952), these groups were underrepresented in the samples of children and adolescents. 3. Military families accounted for the larger proportions in the 6th grade who were children of protective service, Caucasian, fourth generation or more fathers; presumably military rotation and retirement policies account for the smaller proportions of military dependents at higher levels, and consequent decline in associated attributes. 4. Because as Lind (1955) and others have pointed out the Chinese and Japanese are mounting the social and occupational ladder in Hawaii, their children are more likely to attend college; on the other hand, well-to-do children of professional families, who include more Caucasians, long established in America, tend to send their children to private colleges rather than the University of Hawaii. 5. Immigration in substantial numbers of plantation laborers to Hawaii declined sharply during the early 1920's (Lind, 1955); therefore, the younger the group of children sampled the fewer sons and daughters of first or second generation Americans were found.

An additional related factor is that Hawaii is rapidly undergoing cultural assimilation. The change from a colonial culture to an integrated middle class American area has been accelerated by war and statehood. Lind (1955) has called attention to the rapid "fusing" of the races. Figures released by Livesay (1941a) on the national-ethnic backgrounds of 1936 public and private high school seniors afford a rough comparison between pupil populations separated by almost a quarter of a century. Percentages of Chinese dropped from 16 to 7 percent, Japanese from 54 to 43 percent, whereas Caucasians increased from 11 to 18 percent and Filipinos from one to 13 percent.

Within this complex and dynamic cultural context, we have seen that educational-vocational choice was associated with national-ethnic ancestry consistently at all levels, with father's occupation in 9 of 12 comparisons, and with generation in 6 of 12 comparisons. It is assumed that educational program choice might also have been related to such other demographic characteristics as residence, family income, parental education, and parental social class.

Among sociological determinants only the Filipino, Hawaiian and Japanese ancestry items discriminated consistently between educational-vocational position choices. Pending interaction studies, this would support the generalization that cultural tradition may be a fundamental variable in educational decision-making.

Psychological determinants

Before considering trends and continuities across educational levels, it is pertinent to examine briefly the relation of general values, external influences and interests to educational choices. Differences between sub-populations on any of the 35 check list items treated in Tables 14 to 19 may be possible functions of one or more of the following: 1. sex affiliation; 2. specific educational choices within specific institutional contexts plus possible unknown contingent factors determining the respondents' set (e. g. University students filled our questionnaires and were audited during registration); 3. possible variations in administrative procedures (Public school pupils were surveyed in classes); 4. group characteristics including developmental, cognitive and demographic factors. A conclusive detailed interpretation of these differences between groups on the check list items would entail separate investigations employing longitudinal designs and close statistical and experimental controls. The present study is conceived as laying the groundwork for such investigations. However, after inspecting the summary tables and the patterns abstracted in Chapter IV from the cross-tabulations a number of trends can be identified rather tentatively.

As previously noted educational interests were closely associated with sex role, had logical, systematic relationships with available educational choices at all levels. College men said they undertook the study of engineering, and 6th grade hoped to enter a college preparatory scientific course because they liked to work with science. More interest items than any other determinant discriminated between educational-vocational position choices.

General values seemed to reflect a materialistic-altruistic division (Goldsen et al, 1960; Havighurst and Taba, 1949) associated with choices. However, both service to others and economic security were associated with enrollment in Education. There seemed to be more salient and discriminating value items among older groups. Perhaps the development of a logical value system comes with maturity.

Some of the external influence items perhaps reflected typical approaches to the developmental tasks associated with each educational level. Thus the reported influence of parents and relatives waned in the college and adult groups; college seniors felt less influenced by teachers and counselors. External influences in many instances were also associated with program choices within levels. For example, college students in Education reported themselves influenced by parents and high school teachers, students in Arts and Sciences by college courses.

Of particular interest to this investigation are the continuities, those items which were highly influential at all levels, for both sexes, and under all conditions of the six surveys. Four items can be defined as highly constant since they were in the first three of mean rank for all males and female populations: value of satisfaction, interest in ideas, and influence of experience and of friends. These items seem all to be characterized by their generality, not an illogical consequence of the method used to select them. Room is left for individuals to report educational decisions based on a wide range of different specific sources of enjoyment, different ideational contexts, different activity backgrounds, and of different social interactions.

Concordance between educational levels in the rank orders of the three check lists was moderately high for both males and females, as we have reported. In other words, for the items selected to include in all questionnaires one can conceive that the groups responded to rather similar hierarchies. The choice behaviors both of 6th graders and of adults were influenced by considerations of fairly constant relative weight. Such a generalization, of course, need not contradict the existence of individual differences within educational level groups nor the existence of other determinants, more or less specific to the context. As an example of the latter point, the adult questionnaire included items such as "my boss" and "It will help me to get my citizenship," which though inappropriate at the 6th grade level were highly relevant to the decision to select a course in the adult evening program.

Considered either as individual items in terms of saliency or as coefficients in terms of amount of association, general values, external influences and interests tended to be fairly closely and meaningfully related to the various plans and programs, colleges, curricula, and course grouping nearest in time to the educational level groups. This, we feel, is a major finding of this study. We will consider its implications for guidance and curriculum in a later section. At this point the psychological significance of this outcome, obtained in six surveys and for both sexes, was that students who made different rather broad educational decisions tended to report different determinants. To understand or predict a specific educational choice we need to know, among other things, the psychological determinants indicated by the student.

Relative influence of determinants

Our data encourages us to speculate on the relative importance of the various determinants we have identified, their discriminatory power and their interrelationships. These relationships varied with educational level and with the type of choice presented. Thus values, as previously mentioned, appeared to increase in differential importance for the mature groups. For the sixth grade sub-populations only interest and occupational goal items discriminated between over half the educational program preferences presented. At the 9th, 12th and adult levels all determinant distributions studied discriminated. In the college samples, which were the most homogenous of the sub-populations, values, interests, influences and occupational goals had high discriminatory power. It is suspected that perceived sex, class, cultural, and economic self characteristics contributed to expectations as to which positions and occupational objectives were most congruent. Interests first and then values, representing sets and attitudes, perhaps followed consistent with aspired roles. External influences, representing models and reality testing experiences, afforded changing frames of reference. Availability of these influences, in turn, was determined by cultural and educational contexts, as well as by previous decisions. The temptation to stress a single type of determinant--an overemphasis for example on science, security, or satisfaction--might lead to inappropriate choice.

Readiness

Super and Overstreet (1960) recently concluded that youth in America may be pushed too early to specify vocational goals. The point we feel has high pertinence in educational decision-making also. Pressure is most evident in terms of college attendance. The race for space and resulting international tensions have increased concern to identify talented young people at the elementary level and even to encourage them to point toward graduate study in science. The alleged economic and social advantages of a college degree have intensified applications to prestige schools.

Yet from interviews and stability studies, plus our findings on educational and occupational plans, we have seen that Hawaii 6th grade children tended to be inconsistent and unrealistic; discriminatory determinants were narrowed to interests and occupational goals. Many 9th and 12th grade pupils also aimed higher than social need and measured talent would justify. Four out of every 10 entering freshmen at the University of Hawaii, as at other American state universities, fail to complete college. Of those who do remain to graduate many (Dole and Iwakami, 1960c) changed their colleges and major fields of specialization.

The present study raises but does not answer the question, "When is a young person ready to make a sound educational choice?" The answer would seem to depend on individual considerations of self concept in relation to reality. A logical consequence of this research then would be to determine systematically readiness for educational choice. The timing and specificity of educational-vocational position choices could be dependent variables. Citizens in Hawaii and elsewhere would then be in a position to look closely at the educational decisions which follow logically from the organizational structures of their educational institutions.

Implications for Counseling, Guidance and Curricula

Since many Hawaii children appeared to be too immature to make sound educational and vocational choices, we can offer little support to counselors, teachers, administrators or parents in Hawaii and elsewhere who unthinkingly push for specific decisions too early. Prerequisite to sound counseling, planning, and curriculum construction, is a sophisticated awareness of the nature of educational choice. The present study reinforces the generalization that the choice of any young person is likely to be multiply determined and complex. Although frequently mentioned, the importance of individual differences bears repetition. Hawaii student populations at all levels were characterized by a range and diversity of aspirations, demographic attributes, and psychological characteristics. Ample provision for individual treatment is clearly supported. It is the conventional wisdom to generalize, "Of course John is going to college," or "Teenagers today are security minded." Such thinking may be vapid at the least and perhaps dangerous to the welfare of some young people.

The salient associations between various determinants and educational programs may be valuable for counseling if correctly applied with other data. The counselor or teacher might capitalize on his awareness in general of item continuities, item discriminatory patterns, and specific saliencies. He might suggest with caution to a student who is uncertain of his plans that others with similar patterns have tended to follow such and such an educational program. On the other hand an educational specialist who found evidence of inconsistency and reality might utilize determinant data to challenge a young person or encourage plans to increase maturity. However, the patterns presented in Chapter IV can not legitimately be used for prediction, selection or placement of individuals. They were, of course, developed from the responses of large groups.

Current practices in assisting students with plans and choices may overemphasize occupational information and standardized tests and interest inventories, although the validity of these guidance procedures has rarely been found impressive (Rothney, 1958). Yet many of the school children in Hawaii reported that they took such influences into consideration. The findings of this study would seem to support a much broader approach. The guidance specialist must be sensitive to individual roles and self concepts as determined by sex, social class and cultural background. Procedures are supported which stimulate exploration of educational opportunities such as reading catalogues and brochures; visits to campus, business or technical school; trial field and work experiences; cooperative plans and exposure to a variety of adults who have had all sorts of educational experiences. Presumably planned opportunities outside the classroom and counseling office followed by self evaluation and informed discussion would be fruitful.

There would appear to be need for new inventions--new strategies and techniques to fit the demands for sound educational guidance. An example suggested by this research would be a valid and reliable measure of the general values which we have identified as underlying choice. A more thorough sample is needed of possible crucial needs, sets and attitudes.[1]

Changes in psychological determinants and in declared objectives might be examined as outcomes of counseling and instruction. The present investigation lays the groundwork for a variety of possible developmental and experimental approaches to decision-making which might increase understanding of young people and test out conventional and new guidance practices. For example, do general values predict drop-out or underachievement? If so, would counseling, special camps or part-time after school apprenticeships facilitate value modification and thus help to reduce such waste of human resources?

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[1] At the college level the project team is developing an inventory, Reasons for College Choice, adapted from Iffert (1957), What I Want to Do, and the Life Goals Inventory.

McClelland (1958) and Berdie (1954) among others have called attention to the desirability of including parents within counseling processes. If friends appear to have greater influence, especially for male high school and college seniors, and if Coleman's research substantiates the importance of the peer group within adolescent culture (1961), then innovation in the organization of the school and university as social institutions to capitalize on such external forces seems called for. The finding that boys at all levels are more influenced by school courses than the person who taught them, by tests than those who presumably interpreted them, emphasizes the factor of sex differences in the impact of guidance services.

In Hawaii the counselor was more likely to influence secondary school plans especially for college than choices at other levels. We need now to know to what extent this was a function of type of choice presented, availability of professional counselors, or of "ripeness" for counseling. As in the imprinting of animals, is there a period of optimum impact? To some extent the relatively weak influence of the counselor undoubtedly resulted from high student-counselor ratios: at no level were the proportionate number of counselors greater than one per 1,000 students. However, for the present the data would tend to support the assumption that counselors can increase their impact if they collaborate with parents, relatives, teachers, friends and other more influential persons. Personnel specialists at the Department of Public Education and the University of Hawaii have recently initiated studies of student attitudes toward counselors which should be helpful in clarifying the matter of counselor acceptance.

In this study the problems of identifying and guiding the gifted and of utilizing talent were not directly considered. If Hawaii is like other states, undoubtedly substantial numbers of potentially qualified young people are not capitalizing on appropriate educational opportunities. Consideration of the determinants identified in this study might be helpful in assisting these people to plan.

The present study suggests the importance of providing specifically for the uncertain student at all levels in designing curricula, programs and colleges. Perhaps so-called exploratory programs are the answer, providing for relatively easy transition to those with necessarily rigid sequences. Arrangements for rapid retreading might be desirable for the sophomore who wants to transfer from English to civil engineering or for the high school senior who shifts his objective from apprenticeship to college. Unfortunately the apparent desirability of educational reversibility seems to be counterbalanced by an increasing rigidity of entrance requirements. Administrators should feel encouraged by the present research to strive for flexibility.

Whatever the strategies in guidance and curriculum construction at the various educational levels studied, the following generalization would appear justified by the evidence of this investigation: Within a context of social, cultural and sex roles and developmental stages and often governed by occupational goals, the greatest number of individuals will respond to considerations of personal satisfaction, previous experience, friends' examples, and intellectual stimulation. Moreover, a host of specific values, interests, and external influences, not to mention personal characteristics, all combining in a multitude of patterns, contribute to educational choice.

Theoretical Implications

As described in Chapter I our model of human behavior draws heavily upon Allport and Vinacke in conceptualizing the place of values in personality structure, upon Super's self concept actualization within a series of life stages, and upon Tiedeman's modifications which stress that choices occur within the sequences of educational and occupational "positions." In the discussion thus far the findings have been interpreted in these terms. As suggested by the hundreds of patterns and the preliminary interviews, the findings seem to fit especially snugly into Allport's emphasis on the specificity, uniqueness, and idiosyncrasy of much human behavior. To come close to understanding a decision, we need to know much about the person who made it--the context, his attributes, his motivational structure. Whether the choice involves the discrimination of very simple or highly complex relationships with predictable or ambiguous consequences (e.g. purchase of a candy bar from a vending machine versus proposal of marriage) the person represents still a highly complicated behavioral system. Cronbach and Gleser (1957) have pointed out that very little is known about individual decisions as psychological events distinguished from institutional decisions.

Perhaps this study will contribute to greater clarification of the flow of decision-making at different educational levels. Both the range of available choices and their varying consequences, perceived and actual, must be considered. In an absolute sense we identified four general psychological determinants--satisfaction, ideas, friends, experience--which appeared to operate continuously at all levels sampled. We saw that the choice between broad proximate educational programs was generally associated with sex, occupational goal, sociological and psychological attributes. There seems ample justification for looking upon educational choice as a process separate from though often instrumental to career choice. Generalizations from career development theory cannot always be transposed intact.

In this study attention was also extended beyond the choices concommitant with college attendance. The independent categories were associated meaningfully, significantly, and logically not only with these important decisions but with others, as illustrated in Hawaii at the elementary, intermediate, secondary school, and adult levels.

Undoubtedly, there are many determinants of importance other than those selected for investigation. However, for the 35 check list items it was established that many were salient to specific choices; they reflected individual differences, and that for sex, choice, and level subgroups they fell into distinguishable and logical hierarchies. The relationship of these items as well as position choices to other attitude measures or to more basic psychological processes within educational, psychological and socio-economic contexts remains a matter of speculation. Further evidence is needed.

It is concluded then that a more tightly constructed theory would be highly desirable in controlling and understanding educational choice and in contributing to knowledge of the general principles of decision-making. But at the present stage of knowledge too tight a theory might be premature; it migh even constrict needed, imaginative exploratory and descriptive studies. Eventually, however, an integration may be possible with experimentally derived formulations of decision making, as, for example, with those based on bargaining (Siegel and Fouraker, 1960). Also attractive is the prospect of incorporating the results of cross-cultural value comparisons by anthropologists (von Mering, 1961). In the final section of this report several possible research studies are suggested which might help to extend theory of choice behavior in education.

Implications for Further Research

One of our purposes was to lay a groundwork for further systematic investigations. The following problems, among others, are suggested by this study as part of a projected long-term research program:

1. Replication of aspects of this research at other educational levels, perhaps in other states, and using a variety of methodologies. To what extent are our findings

generalizable to other educational decisions?

2. A larger and more representative sample of value items and other determinants, using psychometric scales which would facilitate variance and factor analyses. Can we describe value as a dimension of determinant more precisely?

3. Longitudinal studies of the subject samples. Perhaps also single cases would be studied in depth over time. When ability is controlled, how do determinants relate to later choices, to satisfaction, success, and persistence within educational programs?

4. Systematic study of the effect of such independent variables as counseling, instruction and conventional or new guidance techniques upon educational choices at various levels. The identification in this study of some of the major determinants will permit closer experimental control. Values can be treated also as dependent variables to test hypotheses. For example, would a series of TV programs on career curricula lead to desired value change? At what level do such series have optimum impact?

5. Experimental tests of hypotheses relating psychodynamic processes to career curricula choice. Using depth techniques with socially homogenous small groups, we are in a stronger position to examine deeper motivational levels as they may influence educational plans. For example, do third generation girls of Japanese ancestry from Hawaii plantation communities enter teacher training in part to resolve a conflict between deference and autonomy needs?

6. Verification of reported external influences and culturally derived value patterns upon educational plans. We propose to study children of Chinese and Hawaiian families, matched for talent and socio-economic status, perhaps employing structured interviews and observational techniques. Why do more Hawaiian children proportionately avoid opportunities for higher education?

In sum, a number of variables have been identified and the possible existence of others, which demand statistical or experimental control in further research, has been indicated. Several promising investigations have been suggested, some of them already initiated, of the determinants of educational-vocational choices.

CHAPTER VI

SUMMARY

Background

As he passes through the American educational system from elementary to graduate school, the individual (along with those concerned about him) was conceived as making a series of choices, each of which precedes entry into an educational or non-educational position. Poor choices may lead to frustration for individuals and, on a more general scale, to waste of the nation's human resources. This investigation was concerned with the determinants of these educational choices. Certain demographic attributes and psychological reasons--interests, external influences, and especially values--were selected for investigation. Hawaii was considered a promising site in which to study sociological and psychological determinants because of the diversity and relative stability of its population within a modern American state. It was hypothesized that if understanding of decision-making in education could be extended, curriculum construction and guidance services ultimately would benefit both in Hawaii and nationally.

Objectives

Within the limits set by theoretical framework and methodologies, the research problem was summarized in the following questions about six educational levels in Hawaii:

1. What are some of the personal and socio-economic attributes of students?
2. What are some of their educational and occupational objectives?
3. What reasons do they give for electing proximate and broad educational programs?
4. What is the function of sex role in the determination of educational-vocational choice?
5. Which determinants are continuous across educational levels?
6. To what extent are sociological and psychological determinants and

vocational aspirations associated with broad educational-vocational positions? What part do values play in educational choice?

7. What are the significant and salient patterns of determinant items and educational program preferences?

Procedure

The study was based upon six major surveys of student populations in Hawaii at the 6th, 9th, and 12th grades, state university freshman and senior, and adult levels. There were in all, 10,885 male and 11,925 female respondents. At each educational level, except the 6th grade, the total sampled exceeded 75 percent of the available figures listed as enrolled. For administrative reasons, at the 6th grade a 23 percent selective sample was drawn. The 12th grade included private as well as public schools; otherwise the subjects were students in publicly supported institutions.

Each survey was preceded by pilot studies, group and individual interviews with pupils, and conferences with concerned officials. By retesting small groups, the stability of all items was established as sufficient to justify group comparisons. Validity was verified through interviews. The same instrument, What I Want to Do, was used for both 6th and 9th grade surveys; separate questionnaires were developed at the higher levels. Each questionnaire was adapted in language and content to fulfill specific purposes and to fit characteristics of the population measured. However, each instrument had in common the following types of items which were treated as independent categories:

a. Thirty-five check list items on reasons for educational-vocational position choice--grouped into general values, external influences, and interests.

b. Vocational objectives (present vocation for adults).

c. Certainty about educational plans (except for adults).

d. National-ethnic background.

e. Generation in the United States (except for adults).

f. Occupation of father (except for adults).

The following broad educational-vocational positions were treated as dependent categories throughout the study:

a. Preference for one of five secondary school study programs (6th and 9th grades).

b. Assignment to one of five post-graduation plans (12th grade).

c. Enrollment in one of six undergraduate colleges (college freshmen and seniors).

d. Enrollment in one of eight course groupings (adults).

The 6th grade survey was administered to classroom groups by a project assistant or by teachers under standardized instructions; the 9th and 12th grade surveys were administered through testing coordinators in the schools. The college respondents completed the questionnaires as part of registration at the University of Hawaii and their replies were collected individually; the adults, who were enrolled in community schools on the island of Oahu, completed the survey in their classrooms under the direction of their teachers. The precoded replies of each respondent were audited and punched onto IBM cards for data processing.

The data were analyzed by percentages of totals and of various subgroupings responding to each item at each level. For check list determinants agreement among the six educational levels was measured by Kendall's coefficient of concordance.

To compare males and females, rank order correlation coefficients of check list determinants were computed. The percentages of males were tested against those of females responding to each item for binomial confidence limits. (Presented in detail in six supplementary reports.)

Determinant items were cross-tabulated against educational position choices for each male and female sub-population. To express the extent of overall association, contingency coefficients were computed. To identify patterns within each table, using chi square, the observed proportion for each cell and for each row (determinant) and column (educational program choice) was tested for probability of difference from expected occurrence. To adjust for differences in sample sizes and for unreliability, a formula for identifying salient cells was developed. A salient relationship was defined as one which was statistically significant, important, and reliable.

Results

1. Attributes. Six or more of every 10 respondents at all educational levels were of Oriental or Polynesian ancestry. In the university samples there were higher proportions of Japanese and Chinese and lower porportions of mixed and Hawaiian groups than in other educational levels. The proportion of children or grandchildren of immigrants increased with educational level. Although all occupational classifications were represented, the five educational levels from which information was collected differed from one another in distributions of father's occupation.

2. Educational and vocational objectives. The five populations sampled consistently expressed a desire for more education. Proportionately more girls than boys at the 6th, 9th, and 12th grade levels had college aspirations. Occupational goals classified as professional were most popular in all but the adult group, but each sub-population had distinctive distributions. Approximately 5 out of every 10 at all the five levels sampled were absolutely or very sure about their educational-vocational position choices.

3. Reasons for choice. The most popular general values, when all male educational levels were averaged, were satisfaction, advancement and security; for females, satisfaction, service to others, self-improvement, and practicality. The most popular external influences of males were work experience and friends,

followed by school courses and parents. Among female respondents parents were most influential, followed by friends and work experience. For the males, the most popular interests determining educational-vocational position choice were working with ideas, numbers, machinery and science; for the females, working with children and youth, ideas, and words.

4. Continuity of determinants. Agreement among the six educational levels for 11 value check list items was fairly high and significant ($W = 0.69$ for females and 0.64 for males); for 11 external influences moderately high and significant ($W = 0.51$ for females and 0.53 for males); and for 13 interest items fairly high for the males ($W = 0.72$) as well as for the females ($W = 0.66$). Four items were in the first three of mean rank for all male and female sub-populations: value of satisfaction, interest in ideas, and influence of work experience and of friends.

5. Sex. At all levels hierarchies of value and external influence items showed a moderately high relationship between sexes; all rank order correlations were statistically significant. Rank order correlations between males and females for interest items did not attain significance at any of the educational levels.

When percentages were compared by items males consistently prized more highly opportunities for advancement and potential income, were more interested in machinery, science and growing things; the females put higher value on satisfaction, the chance to serve others, self-improvement, and practicality, were more interested in work with children and youth, food and words, and reported more frequently they were influenced by friends, teachers, and parents.

6. Relationships to educational programs. At all levels for both male and female students national-ethnic ancestry and occupational goals were significantly associated with choice. Interests tended to be more closely related to choice

than values which in turn were higher on the whole than influences. A tendency for larger relationships at the higher educational levels was noted for values and influences.

7. Patterns of determinants. A large number of significant or salient patterns of determinants were identified for males and females by educational levels and educational-vocational position preferences. Of 14 most discriminating psychological determinant items, interests were the most frequent. Of the sociological determinants analyzed, Filipino, Hawaiian and Japanese ancestry were the only discriminating items. Occupational goals and extremes of certainty were found to be consistently discriminating. Values and influences showed consistent power in discriminating between specific program preferences at all levels, except the 6th grade.

Conclusions

1. Distinctive characteristics of six populations.

1.1 Each of the six sub-populations differed in many respects--in demographic attributes, educational and vocational plans, as well as in responding to the check lists of determinants. In a cross-sectional design there may be a variety of possible explanations for differences, explanations which may differ from level to level.

1.2 The 6th grade sub-population was characterized by the inclusion of a distinct socio-economically homogenous, "military" school district. Even though the children were judged to lack readiness for educational decision-making, the hierarchies of psychological determinants were fairly similar to the other levels.

1.3 The proportion of 9th grade children electing glamor occupations was smaller than at the 6th grade level but the popularity of high status fields far exceeded estimated national and local demands. It was recommended that less stress should be placed on college and occupational choice and more upon laying the groundwork for selection of an appropriate secondary school program.

1.4 The 12th grade pupils seemed to be more realistic in plans and determinants than the two younger groups. However, the proportion with college aspirations, especially girls in teacher preparation, somewhat exceeded comparable figures for other states. It may be that cultural and economic pressures have oversold higher education in Hawaii.

1.5 Such selective factors as high school achievement, general ability, family finances and motivation helped to account for the distinctive characteristics of the university freshman sample. Differences in cultural tradition also may account for the overrepresentation of Oriental students. Determinants such as security and an interest for men in science, for women in children and youth, were linked with the popularity of engineering and teaching as fields of specialization. It was concluded that perhaps half the freshmen had relatively little information about the choices open to them in education and had vaguely formed value systems.

1.6 In comparing university seniors with freshmen there was much evidence that the socio-economic characteristics of the university student body were changing, perhaps because of statehood and the growing emphasis on international education. Consistent and statistically significant differences between seniors and freshmen for determinant items were interpreted as illustrating the implementation of the self concept. Reality testing and value modification seemed to occur through courses, work experience, and perhaps knowledge of test result.

1.7 The adult group was the most heterogenous of those studied, not only in age and educational experience but also in social characteristics.

Substantial proportions were married, housewives or employed, over thirty, newcomers to Hawaii and had completed some high school. Although they had a great variety of reasons for attending classes, the single most dominant reason appeared to be what the participants thought of as self-improvement.

2. Determinants of educational choice.

2.1 The hundreds of salient and significant patterns identified in the analysis of contingency tables were considered important for local guidance practices and for laying the groundwork for further studies. They provided ample confirmation of the generalization that the determinants of educational choices are multiple and interrelated in complex ways.

2.2 In making educational choices, conceived as preceding and preparing for the choice of life activities (work, homemaking) the female has a different conception of what is available to her than does the male in our society. By and large the obtained differences in the popularity of educational determinants were consistent with expected adult sex roles, but it seems probable that other personal and social variables may also have been interacting with sex affiliation.

2.3 Occupational objectives of the younger students were based to a considerable extent on unrealistic perceptions of self and society, reflected socio-economic forces, and were substantially but not perfectly related to educational-vocational position choices. Educational position choices as measured emerged at each level as decision processes to be investigated separately.

2.4 It was suspected rather hesitantly that either extreme certainty or extreme uncertainty about the future reflected immaturity. If so, for the populations studied maturity of choice increased with educational level. Further study is indicated.

2.5 A variety of factors may have contributed to the differences found between sub-populations in sociological characteristics, including the rapid cultural assimilation now in progress in Hawaii.

2.6 Within a complex and dynamic cultural context, educational-vocational choice was associated with national-ethnic ancestry consistently at all levels. Pending more closely controlled studies, the generalization was supported that cultural tradition may be a fundamental variable in educational decision-making.

2.7 The importance of interest as a determining factor in educational choice was confirmed; more interest items than other determinant items discriminated between educational-vocational position choices.

2.8 General values seemed to reflect a materialistic-altruistic division which was associated with choices.

2.9 Some of the external influence items perhaps reflected typical approaches to the developmental tasks associated with each educational level.

2.10 The continuous items--satisfaction, ideas, experience and friends--seemed to be characterized by their generality, perhaps because of the method of selection.

2.11 Considered either in terms of the saliency of individual items or of amount of association within the contingency tables, general values, external influences and interests tended to be fairly closely and meaningfully related to the various plans and programs, colleges, curricula, and course groupings nearest in time to the educational level groups.

2.12 It was suggested that the person may make educational choices instrumental to personal or vocational objectives and congruent with perceived sex, class, cultural and economic self-characteristics. Values, which increase in importance with maturity, may develop after interests and may be consistent with aspired roles. External influences may represent changing models and reality testing experiences.

3. Readiness. Super's conclusion that by and large youth in America may be pushed too early for specificity in occupational and educational planning was supported. Further research is needed on readiness for choice.

4. Implications for counseling, guidance, and curriculum construction.

4.1 Prerequisite to sound counseling, planning, and curriculum construction is a sophisticated awareness of the complexity of educational-vocational position choice, of typicalities in determinants and of the range of individual differences within student populations. The salient associations between various determinants and educational programs may have value if applied cautiously.

4.2 The data, especially on reported external influences, support innovation in guidance procedures and curriculum organization and a greater stress on utilizing many determinants rather than depending entirely upon occupational information, aptitude tests, and interest inventories.

4.3 The present study suggests the importance of providing specifically for the uncertain student at all levels, and if possible for flexibility in the entry requirements to educational positions.

5. Theoretical considerations. This study was seen as supporting an emphasis on both nomothetic and idiographic approaches to choice behavior. Choices are made by individuals in social contexts who are striving toward self-actualization within a series of life stages and a sequence of educational and occupational positions. Responses of groups to check list items are but one type of determinant, reflect individual differences, fall into logical hierarchies, and are often salient to specific choices. Further evidence of their relation to attitudes and to more

basic psychological processes seem prerequisite to a theory of choice behavior in education.

6. Implications for further research studies. It was felt that the groundwork had been laid for further systematic investigations. Variables demanding statistical or experimental control in further research were identified. Specific studies in Hawaii were suggested as part of a projected research program on the determinants of educational-vocational position choices.

APPENDIX I

SOURCES OF VARIABILITY

A number of possible sources of variability set limits on interpretation, generalization and conclusions, Some sources of variability may be considered as a product of the actions of the experimenters, some as inherent in the actions of the subjects.

Possible experimental errors

Only at the 6th and 9th grade levels were exactly the same instruments used. Because of the differing characteristics of the populations sampled, it was felt desirable to adapt item forms. The differences across educational levels are therefore to some extent differences created by modifications in instruments.

Except for approximately half of the respondents in the 6th grade, the surveys in the 6th, 9th, 12th, and adult populations were administered by various teachers under supervision. Although each teacher was given detailed instructions and an opportunity to report any unusual incidents during administration, it can hardly be assumed that the conditions of administration were completely standardized from classroom to classroom. The amount of coaching, the impact of teacher personality, and even the manner of interpreting and giving instructions may have varied from class to class.

Except for the 6th grade population we were successful in obtaining the 75 percent or more sample of the number listed by the institution as technically enrolled. Logical subdivisions within each educational level were represented in equal proportions so far as we could determine. We assume that if we had been able to obtain 100 percent return for each population there would have been little variation in the results. As described previously, the 6th grade population cannot be considered representative.

The practice of auditing replies was designed to reduce careless or illogical responses, that is, subject error. The 6th, 9th, and 12th grade returns were audited after the survey was administered. Inconsistencies, if detected, were corrected by logical processes after inspection or, in less than 1 percent, the respondent's protocol was discarded. In the surveys of college freshmen and college seniors, which were administered directly under the supervision of the project team, it was physically feasible to detect and correct the more glaring inconsistencies at the time that the survey form was submitted, since auditing was integrated with the process of collection.

Another type of sampling problem faces an experimenter. He must decide within the limits of time and resources which subject responses to elicit. We selected only a minimal number of personal and socio-economic attributes for treatment. One cannot of course assume that attributes (for example, years of residence in Hawaii) which were not sampled were or were not important.

We were well aware that our check list of determinants was not comprehensive and inclusive. A determinant which was not included on the check list (for example, the influence of religion) may have been more important than some of those which were included.

The check list form has the virtue of simplicity. We have discovered in our supplementary surveys that other forms--open end questions, sentence completions, themes, Likert type scales, etc.--elicit somewhat different responses. Any response is in part a function of methodology.

It is also important to note that determinants which are of major importance at one educational level may have little weight at another. We have tried to stress determinants which cut across levels and were independent of specific choices. We also chose to ignore the idiosyncratic or unconscious determinants which are highly significant in idiographic methodology and must be suspended in nomothetic research.

Another somewhat arbitrary experimental decision concerned which class of dependent category to employ and how wide to make it. Although we have explained the rationale behind our decisions in this respect, we are aware that we might have gotten different results if, for example, we had selected college or no college as an option to present to the 6th, 9th, and 12th grade populations. It is important also to realize that when we categorized by five plans after high school or by colleges within a university we may have combined discrete and inconsistent subcategories. Thus, the College of Arts and Sciences includes 31 possible majors ranging from anthropology to zoology.

Possible subject errors

On the basis of our interviews with students at the various levels, our studies of stability of instruments over a short period of time, conferences with teachers and administrators, and observation, it was quite clear that respondent reactions to the six surveys might have been contaminated by a number of important potential sources of error.

Although we felt reasonably confident that most of the respondents understood the instructions and what was expected of them, we have reason to believe that the populations at the extremes, that is, the 6th graders and the adults, were less well able to understand than the other groups. Sometimes misunderstandings were based on inability to read, lack of knowledge of the terms used, or lack of experience with the concepts. In studying 6th graders through interviews we found:

> "A paradox was noted between the children's ability to relate each of the determinants of high school program choice and a sparing selection of determinants. That is, they tended to see logical relationships between many determinants and program choice, but kept their choice of determinants to a minimum. When requested to account for such omissions (as these came to light during the interviews) the usual answer was 'I don't know.' The children were better able to define those things that were not determinants or that they did not like than to explain the choices they had considered but had not made."

Stability of instruments.

In studying small samples for stability after one week, in Table 28 we have applied five different measures to the check lists. The groups varied to some extent by measure as well as by determinant. Thus, the 9th grade pupils were more often consistent in the percent of their responses to influences and to value items; they were higher than the other levels in the mean number of items checked per person for values and influences. On the other hand, if we look at the percent of consistent answers and no answers, we see that of all levels more university freshmen responded on second administration as they had on first administration. Similarly for interests, the college group was most stable in the percent checked on each administration; but, in contrast, the 6th and 9th grade groups ranked highest in the similarity of interest item popularities between the first and second administrations.

It is difficult to say to what extent changes after a week can be attributed to true changes of attitude by the respondents; to carelessness and resistance; or to misunderstanding and errors as a function of instrument or of administration. By permitting comparisons between items, Table 29 provides some basis for estimating avoidable variations. The low consistency of occupational objectives for the 12th grade sample in comparison with the other groups may well be a function of some specific administrative error. It was also found that 8 of the 106 seniors had changed sex! The implications for the behavioral scientist are, first, that he allows for error in considering the data; secondly, that major findings should be confirmed in new studies; and, finally, if there are further investigations involving similar administrators or subjects, control should be applied more closely of such glaring discrepancies.

In the present report we have used individual interviews, group conferences and thematic material with small samples as a partial check. Replications on the

12th grade group in 1959, on the university freshmen in 1958 and 1960, and on university seniors in 1958 and 1960 helped to verify some of our results.

If we can conclude with confidence that the groups varied in their ability to understand and to respond meaningfully to the various instruments, it would seem to follow that they probably also varied both between different levels and also within levels in the depth and accuracy of understanding, with which they perceived themselves. Iwakami and Dole (1961, b) report on an interview with Barbara B. a ninth grader, five days after administration of What I Want to Do.

> "Barbara ranked in the middle third of her class, lived at home with her father, an engineer, and her mother, a social worker, both college educated . . . Barbara selected the college preparatory scientific program for high school. She chose it because the others were not what she wanted and her mother wanted her to go to college. She chose scientific rather than general because she liked mathematics and science, and mathematics was her strong point . . . Considering the check list of influences, she checked co-curricular activities because she liked to read science books in her leisure time; 'parents' because of their influence on her decision to orient her schooling towards college preparation, and 'relatives' for the same reason . . . Her mother a social worker, expressed her desire that Barbara specialize in something other than social work . . . Her father wanted her to become an engineer . . . Barbara apparently had not reconciled conflicting parental models. This may explain the discrepancy between her selection of a scientific college program goal (father) and a social work occupational goal (anti-mother)."

We were obviously also dependent upon the willingness to cooperate, the ability to pay attention and the amount of motivation toward filling out the questionnaires. The assumptions that the respondents all cooperated to the fullest and that at all levels sampled the amount of cooperation was equivalent, are to an unknown extent not completely supported. There were, for example, some college seniors who filled out the questionnaire only because it was required. A few teachers reported incidents of hostility or apathy, especially on the part of the secondary school seniors.

In presenting these sources of error, some stemming from methodology and some from subject reaction, we do not intend to apologize, but rather to make explicit certain uncontrolled variables which may or may not influence substantially our results. We feel that generalizations drawn on the basis of comparisons across educative levels must therefore be made quite cautiously. Given these sources of error plus **dissimilarities** in the populations sampled, we do not feel this study justifies by itself firm inferences about developmental processes. In fact, it is highly desirable to verify such inferences in longitudinal studies. Our populations cannot be considered as differing only in chronological age and level.

In presenting our results we feel more comfortable when we can point to a similar finding in each of the six diverse populations, e. g. to continuities and consistencies. We feel that inferences drawn from similarities within each of the six sample populations are probably sounder than those drawn from differences. The probability of obtaining the same results by chance in six investigations is less than .05 if chance probability is .50 for each single observation.

Table 28

Stability of Psychological Determinants by Levels Influences

Educational Level	Items N	Responses and NA Consistent %	Responses Consistent %	Items Consistent x	 σ	Items Inconsistent x	 σ	Coefficient of Stability ρ
6th Grade N= 29	15	82	43	1.9	1.6	2.7	1.8	0.77[a]
9th Grade (March) N= 32	14	86	54	2.7	1.3	1.9	1.3	0.86
9th Grade (April) N= 31	15	81	51	2.9	1.7	2.8	1.9	0.84
12th Grade N= 106	16	83	44	2.2	2.0	2.7	1.8	0.91
University Freshmen N= 29	15	89	43	1.3	1.2	1.7	1.3	0.83

[a] All values of ρ are significant at the .01 level.

Table 28 (Cont)

Stability of Psychological Determinants by Levels Values

Educational Level	Items	Responses and NA Consistent	Responses Consistent	Items Consistent		Items Inconsistent		Coefficient of Stability
	N	%	%	x	σ	x	σ	ρ
6th Grade N= 29	15	81	41	2.0	1.8	2.9	1.8	0.75
9th Grade (March) N= 32	15	81	52	3.2	1.8	2.8	1.7	0.95
9th Grade (April) N= 31	15	81	53	3.3	2.9	2.9	1.8	0.92
12th Grade N= 106	14	79	46	2.4	2.3	2.9	1.9	0.89
University Freshmen N= 29	14	86	42	1.3	1.3	1.9	1.4	0.86

Table 28 (Cont)

Stability of Psychological Determinants by Levels
Interests

Educational Level	Items	Responses and NA Consistent	Responses Consistent	Items Consistent		Items Inconsistent		Coefficient of Stability
	N	%	%	x	σ	x	σ	ρ
6th Grade N= 29	12	86	54	2.0	1.4	1.7	1.2	0.94
9th Grade (March) N= 32	12	87	58	1.9	1.1	1.6	1.2	0.94
9th Grade (April) N= 31	12	84	52	2.1	1.4	1.9	1.6	0.95
12th Grade N= 106	12	88	48	1.4	1.2	1.4	1.2	0.90
University Freshmen N= 29	11	95	74	1.2	.8	.5	.4	0.86

Table 29

Stability of Selected Items by Levels[1] (Percentages)

Educational Level	Sex	National-Ethnic	Generation	Educational choice	Certainty of choice	Occupational Goal	Father's Occupation
6th grade N = 29	100	100	90	69	72	90	85
9th grade (March) N = 32	100	97	94	88	97	88	63
9th grade (April) N = 31	100	97	77	71	77	83	63
12th grade N = 98	92[a]	96	90	79	78	39	80
University freshmen N = 29	100	100	97	83	76	79	100
Number of options =	2	9	5	5	5	81-83	9-83[b]

---

[1] Computed on basis of formula $\frac{(a_1 - a_2) + \ldots\ldots\ldots(k_1 - k_2)}{N}$ in which a_1 is total number checking option

a, on first administration, a_2 total on second administration after one week and k is last of k options.

[a] Based on 106 cases. The 8 individuals who were inconsistent were removed from analysis of the other selected items.

[b] Nine options were presented to the University freshmen.

Table 30

Stability of Check List Determinants After One Week by Levels

Determinant	Percentage of Agreement by Levels			
	6th Grade	9th Grade	12th Grade	University Freshman
Influences				
Hobby	90	84	89	97
Freetime	72	74	87	97
Teacher	90	84	81	83
Parents	86	77	76	83
Classes	69	65	81	83
Work Experience	59	87	76	90
Friends	76	77	73	76
Relatives	83	97	83	100
Counselor	90	87	77	76
Tests	72	71	76	83
Random Choice	86	90	90	90
Career Day	93	97	76	a
Movies, TV	79	68	92	a
People in Field	90	71	81	a
Other	93	87	94	90
Values				
Aptitude	72	84	77	79
Serve Others	83	84	85	93
Practicality	72	58	76	86
Specialization	52	58	71	90
Security	72	81	76	72
Income	83	84	72	90
Fastest Path	86	100	a	100
Independence	76	68	78	100
Advancement	72	71	69	79
Easy Course	100	97	93	100
Prestige	93	90	92	93
Satisfaction	83	74	76	72
Self-improvement	86	74	74	72
Parenthood	79	84	76	a
Other	100	90	96	86
Interests				
Words	90	84	84	100
Ideas	62	68	76	a
Food	93	87	94	100
Machines	93	77	77	86
Numbers	83	61	87	100
Adults	90	90	87	97
Music	83	87	93	93
Children, Youth	76	90	90	93
Science	76	84	94	93
Plants, Animals	100	84	93	93
Art	76	90	91	100
Other	100	90	95	100
N =	29	31	106	29

---

[a] Item omitted from this survey.

APPENDIX II

SUMMARY OF CONTINGENCY TABLES

As indicated in Chapter III, 116 contingency tables were prepared in which independent categories were cross-tabulated against dependent categories. For each table chi squares were calculated for cells, rows, and columns and summed to obtain C. Copies of these tables may be obtained from the American Documentation Institute.[1] Table 31 summarizes for all items the number of significant rows, that is, the number of distributions across educational choices which differed from expectation at the .05 level. Thus the item satisfaction was considered for 7 male and 7 female sub-populations against the various educational-vocational choices. In 9 tables the chi square value was significant.

Table 32 summarizes the percentages of significant row items and significant column items when the contingency tables were analyzed by levels and by determinants. It can be seen that in 18 cross-tabulations for male and female military 6th grade pupils 36 percent of the 146 rows examined were significantly different from expectations and 46 percent of columns. Comparisons between levels of determinants should be made cautiously since the contingency tables were not completely equivalent in degrees of freedom or in sub-populations sampled.

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[1] Order Document no. 6897 from the Chief, Photoduplication Service, Library of Congress, Washington 25, D. C. Auxiliary Publication Project, remitting $ 5.00 for microfilm (35mm) or $ 16.25 for photocopies.

Table 31

Summary of Significant Chi Squares for Rows by Determinant Items

Determinant Items	$P < .05$	$P > .05$
Values		
Satisfaction	9	5
Security	11	3
Serve others	10	4
Advancement	11	3
Self-improvement	6	9
Aptitude	6	8
Potential income	10	4
Specialization	9	5
Practicality	8	6
Independence	3	11
Prestige	7	7
Fastest path to diploma	4	4
Easy courses	3	3
Easiest thing to do	2	--
Parenthood	5	3
Learn about U. S.	2	--
Citizenship	2	--
Learn English	2	--
Family living	2	--
Other	4	7
External influences		
Classes	9	5
Parents	7	7
Tests	5	7
Teacher	9	5
Friends	5	9
Work experience	9	5
Relatives	5	9
Hobby	11	3
Free time activities	10	4
Random choice	5	8
People in field	5	3
Movies and TV	1	7
Career day	3	3
Counselor	5	3
ROTC	1	--
College courses	3	1
College instructor	2	--
Spouse	2	--
Boss	1	1
Other	5	9

Table 31 (cont)

Summary of Significant Chi Squares for Rows by Determinant Items

Determinant Items	$P < .05$	$P > .05$
Interests		
Children and youth	11	3
Science	14	--
Ideas	6	6
Adults	8	6
Numbers	11	3
Music	9	3
Art	12	--
Machines	10	1
Words	11	1
Plants and animals	11	2
Food	9	1
Music or art	2	--
Other	6	7
Occupational goal		
Professional	12	--
Semi-professional	6	3
Professional and semi-profess.	1	1
Clerical, sales	7	1
Domestic, personal, and protective	6	4
Housewife	5	--
Managerial, farm	7	4
Skilled, craftsman	6	1
Skilled, semi-skilled, unskilled, don't know in combinations	12	4
Other	2	2
Don't know, no answer	7	--
Operative	--	2
National-ethnic		
Caucasian	9	5
Hawaiian	7	2
Filipino	8	2
Japanese	10	4
Cosmopolitan, mixed	4	6
Chinese	5	5
Other, don't know, no answer	7	6
Generation in U. S.		
First	1	9
Second	5	7
Third, fourth, fifth and over	7	9
Family Hawaiian	4	--
Don't know, no answer	4	6
Don't know and first	--	2

Table 31 (cont)

Summary of Significant Chi Squares for Rows
by Determinant Items

Determinant Items	$P < .05$	$P > .05$
Father's occupation		
Professional	2	2
Semi-professional	2	2
Professional & semi-profess.	4	6
Managerial	5	9
Clerical, sales	5	9
Domestic, personal, protective	1	9
Skilled	3	11
Semi-skilled	6	5
Semi-skilled, & unskilled	--	2
Unskilled	7	5
Don't know, no answer	6	8
Other, not classificable	2	10
Certainty		
Absolutely sure	9	3
Very sure	6	6
Fairly sure	4	8
Not sure	2	3
Completely unsure	7	1
Don't know	2	--
Change in ideas about self		
Very much	2	4
Somewhat	2	4
Very little	3	3
Not at all	--	6
Don't know, no answer	2	4

Table 32

Summary of Significant Chi Squares for Rows and Columns by Educational Levels and by Determinants

Educational Level	Contingency Tables N	Row Items	Percent Significant Row Items[a]	Column Items	Percent Significant Column Items[a]
Military 6th grade	18	146	36%	90	46%
Local 6th grade	18	143	27	90	26
9th grade	18	166	80	90	88
12th grade	16	155	74	80	93
University freshman	16	121	55	80	68
University senior	18	114	45	90	47
Adult	10	116	85	76	96
Determinants					
National-ethnic	14	80	58	74	64
Generation	12	54	39	60	42
Father's occupation	14	116	27	70	39
Occupational goal	14	95	77	74	91
Certainty	12	60	60	60	47
Change in plans	6	30	30	30	37
Values	14	197	59	76	72
Influences	14	192	54	76	75
Interests	14	153	78	76	92

[a] $P < .05$

APPENDIX III

MATERIALS

Appendix III includes a copy of each of the five instruments used in this study. Directions for administering What I Want to Do, report form, and letter of transmittal to cooperating principals represent materials used in the 6th and 9th grade surveys. Similiar materials were adapted for the 12th grade.

The supplemental report on each survey included summary distributions of responses to all items. The reports of the school surveys also listed participating schools and contained copies of the precoded answer sheets.

What I Want To Do
April 1960

DIRECTIONS FOR ADMINISTERING

WHAT I WANT TO DO

1. BACKGROUND & PURPOSE. As outlined in detail elsewhere, this survey is sponsored by the Department of Education and the University of Hawaii. It has been approved by the Superintendent, and is being conducted by the Psychological Research Center (University of Hawaii) through the Division of Research and Statistics, under a grant from the U. S. Office of Health, Education and Welfare.

   We are interested in the present plans of public school pupils, especially their ideas about high school and the reported determinants of those ideas. The information gathered from each pupil will be used for research and for possible follow up. Eventually we hope the results will improve guidance and instructional practices.

2. MATERIALS. For each pupil to be tested there should be a question booklet and an answer sheet. The pupil may supply his own pen or pencil.

3. ADMINISTRATION. Please follow standard testing procedure. The survey is untimed and most groups finish within twenty minutes. Whispering, interruptions, or collaboration should be discouraged.

   When the group is assembled say: THIS IS A SURVEY (NOT A TEST) TO FIND OUT HOW YOU THINK NOW ABOUT YOUR FUTURE. THERE IS NO RIGHT NOR WRONG ANSWER AND NO TIME LIMIT. YOUR ANSWERS WILL HELP YOUR SCHOOL.

   LET US GO THROUGH THE DIRECTIONS TOGETHER. READ THE DIRECTIONS ON YOUR QUESTION BOOKLET SILENTLY WHILE I READ THEM ALOUD.

   (READ DIRECTIONS ON FACE OF BOOKLET ALOUD)

   Then say: PLEASE WRITE YOUR NAME, TODAY'S DATE, AND THE NAME OF THIS SCHOOL ON THE ANSWER SHEET. PLEASE DO NOT MARK ON THE QUESTION BOOKLET. TRY TO ANSWER EVERY QUESTION.

Pause: DO YOU HAVE ANY QUESTIONS?

Pause: PLEASE GO RIGHT AHEAD AND FINISH MARKING THE ANSWER SHEET. WHEN YOU ARE FINISHED BRING YOUR ANSWER SHEET AND BOOKLET TO ME.

Suggestions

You may find it helpful to walk around the room and make sure the instructions are being followed.

Suggestions for answering pupil questions: Help the pupils with simple matters of fact; e.g. What is today's date or clarification of directions. Avoid elaborate definitions of terms e.g. What's this word "aptitude" or "what does a mortician do." Say: "My instructions are that if you aren't sure what the words mean, answer the best you can. After you have turned in your paper I will be glad to discuss it with you if you wish." Note such questions on report form.

In other words we prefer that if learning were to take place as a result of the survey that it occur afterwards so that the results will not be influenced by different administrators.

4. COLLECTION OF MATERIALS. Please have the pupils turn in their answer sheets individually so that you may rapidly glance at them for gross discrepancies. Do not take the time to read them over. A quick glance will often screen out the occasional individual who has neglected to enter his name, etc.

5. REPORT FORM. Please fill out the report form immediately after administering. We greatly appreciate your suggestions and observations.

6. RETURN OF MATERIALS. Question booklets and answer sheets should be returned with the report form to the Division of Research and Statistics within a week. If by mail, address to Mr. Yeuell Y. Harris.

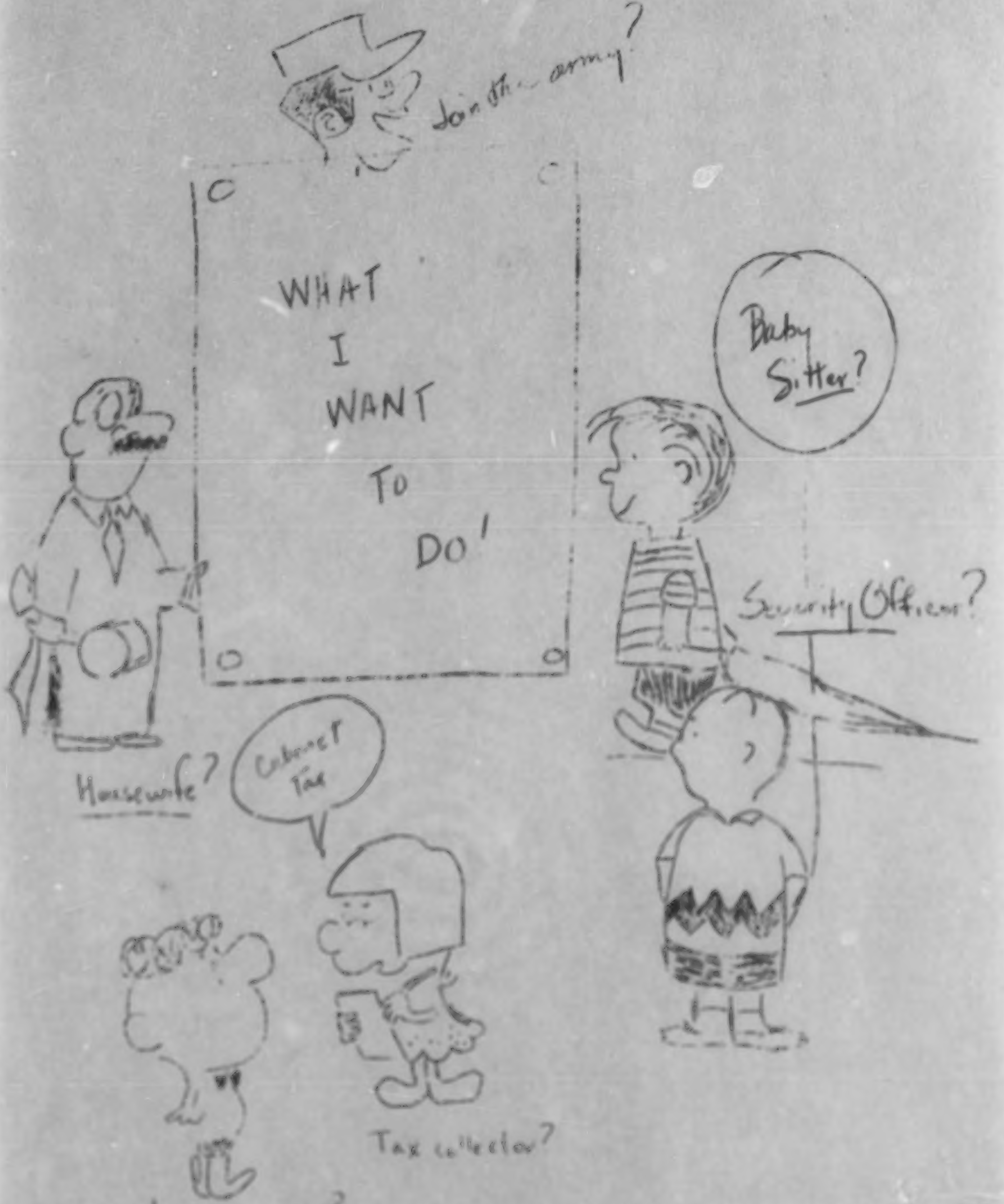
7. FEEDBACK OF RESULTS TO SCHOOLS. We hope to return the answer sheets to you with a statistical summary. You may wish to make your own analyses or to follow up. A summary copy of the completed report of the survey will be sent to you next fall.

Mahalo for your kokua,

Arthur A. Dole
Director
Bureau of Testing and Guidance
University of Hawaii

Yeuell Y. Harris
Deputy Superintendent
Division of Research and Statistics
Department of Public Instruction

Eileen Iwakami
Junior Research Assistant
Bureau of Testing and Guidance
University of Hawaii


Join the army?
WHAT I WANT TO DO!
Baby Sitter?
Security Officer?
Housewife?
Cabaret Tax
Tax collector?
business man?

April 1960

WHAT I WANT TO DO

QUESTION BOOKLET

State of Hawaii, Department of Education and the University of Hawaii

Your school department and the University of Hawaii would like to find out more about public school children. We want to know what ideas you may now have about your future, so that we will be better able to help you later on. But first, we need some information.

YOU CAN HELP US BY ANSWERING EVERY QUESTION ON THE ANSWER SHEET.

There are no right and wrong, nor good and bad answers. We want to know only what YOU think, so please answer the questions in the way YOU and not your friend sitting next to you would answer them.

DO NOT MARK THIS BOOKLET

HOW TO ANSWER THE QUESTIONS

Example: Question A, My father is:

Mary's father is Hawaiian. She looks at the list in the booklet and finds Hawaiian. It is number 3. Then, she takes her answer sheet and looks at Question A. She finds the number 3 and marks an X in the blank after that number ON THE ANSWER SHEET.

YOU ARE TO MARK YOUR ANSWERS ONLY ON THE ANSWER SHEET.

A My father is: (Mark an X after the number of the answer you choose ON YOUR ANSWER SHEET. CHOOSE ONLY ONE)

1. Caucasian
2. Chinese
3. Hawaiian
4. Filipino
5. Korean
6. Japanese
7. Other
8. Mixed
9. I don't know

B Who is the first person in your family to come to the U. S.? Mark an X after the number of the answer you choose ON YOUR ANSWER SHEET. CHOOSE ONLY ONE.

1. Father
2. Grandfather
3. Great grandfather or before
4. I don't know
5. Does not apply to me. Family is Hawaiian

C

When you go to high school, you will have to choose from one of the five kinds of study programs listed below in the boxes. Which ONE of the five study programs would you like to take in high school?

Mark an X after the number of the program you choose ON YOUR ANSWER SHEET. CHOOSE ONLY ONE.

Program 1. College preparatory (scientific). Study mostly higher mathematics, and about plants, animals, air, water, and the sun and stars, so that I can go to college to study science. These are the courses you will be taking:

Advanced Algebra
Biology
Chemistry
Plane Geometry
Solid Geometry
Trigonometry
Typing
Foreign Language

Program 2. College preparatory (general). Study mostly art, music, history, and some math and science so that I can enter college. These are the courses you will be taking:

Speech
A science course
Art
Foreign Language
Music
Typing
Algebra or any other math course

Program 3. Technical. Study in the shop about machines, tools, gardening, how to make and fix things --- or homemaking, how to cook, sew and take care of a family. These are the courses you will be taking:

Science
Math
Mechanical drawing

Practical Arts:
- Shop
- Homemaking
- Horticulture

Program 4. Business occupations. Study about business, shorthand, typing, bookkeeping and train to become a clerk so that I can work in an office. These are the courses you will be taking:

General Business
Bookkeeping
Typing
Shorthand
Business Arithmetic
Business English
A course in science

Program 5. Terminal. For those who do not think they will go on for more schooling after graduation from high school. Study mostly those things that they need to study in high school and not take any special program of courses like the ones listed above. These are the courses you will be taking:

Physical Education
Family Education
Speech
Math
Science
Typing
Art
Music

DO NOT MARK THIS BOOKLET

D

How sure are you now that it is the study program you want to take in high school?

Mark an X after the number of the answer you choose ON YOUR ANSWER SHEET. CHOOSE ONLY ONE.

1. I am so sure that I know nothing will change my mind.
2. I am sure, but I may change my mind.
3. I guess I am sure.
4. I am not sure and I think I will change my mind.
5. I am not sure at all and I really don't know.

E

Usually when we like something, it's partly because of the things that have happened to us or the people we know. What sorts of things have you done and who are the people you know that made you decide what study program you want in high school?

Mark an X after the number of the answer you choose ON YOUR ANSWER SHEET. YOU MAY CHOOSE MORE THAN ONE ANSWER.

1. Hobby (Things like building model airplanes or collecting dolls.)
2. Free time activities (Things like the boy or girl scouts or just the things I do outside of school when I have free time. Just playing.)
3. Teacher (Any teacher I have had.)
4. Parents (My mother and father.)
5. Classes (What I have learned in my classes at school.)
6. Work experience (I have done the kind of work for which I want to study and I like it.)
7. Friends (Talking things over with my friends.)
8. Relatives (Talking to my aunts, uncles, cousins, brother or sister.)
9. A counselor (My school counselor.)
10. Aptitude and Interest tests (Tests I have taken to find out what I am good at doing and what I like to do best.)
11. Random choice (First thing I thought of. I did not think about what I would study in high school until now.)
12. Career Day Program (The kind of program we have at school that is all about the career we would like to have.)
13. Movies and T.V. (I have seen on T.V. and in the movies the kind of thing I would like to do.)
14. People in the field (I have talked to people who are doing the kind of work I want to do.)
15. Some other reason not given here. Write in your own reason ON YOUR ANSWER SHEET.

F

What are some of the reasons why you want the high school study program you chose?

Mark an X after the number of the answer you choose ON YOUR ANSWER SHEET. YOU MAY CHOOSE MORE THAN ONE ANSWER.

BECAUSE:

1. Aptitude (I think I will be able to do well in that kind of study.)
2. Chance to serve others (I want to be able to help others later on.)
3. Practicality of subject (It will be useful to me later on.)
4. Preparation for specialization (I want to learn to be good at doing the one thing I want to study for.)
5. Security of employment (There are many sure jobs in the kind of thing I will study for.)
6. Potential income (What I study will help me to earn a lot of money later on.)
7. Fastest path to a diploma (I can finish school quickly and get my high school diploma.)
8. Independence (It will help me to stand on my own two feet and do things for myself and by myself.)
9. Opportunity for advancement (It will help me to get a good job in which I can get ahead in life.)
10. Easy courses (The study is not hard for me to do.)
11. Prestige (I will stand high among those who know me and I will be respected for what I do.)
12. Satisfaction from field (I am interested in that kind of study and enjoy it.)
13. Self improvement (I can help myself become a better person.)
14. Parenthood (It will help me to be a better mother or father someday.)
15. Some other reason not given here. Write in your reason ON YOUR ANSWER SHEET.

DO NOT MARK THIS BOOKLET

G What are the kind of things that you like and that helped you to choose the study program you want in high school?

Mark an X after the number of the answer you choose ON YOUR ANSWER SHEET. YOU MAY CHOOSE MORE THAN ONE ANSWER.

WORK WITH:

1. Words (such as writing, reading, spelling and so forth.)
2. Ideas (such as planning, thinking about things and so forth.)
3. Food (such as cooking, baking and so forth.)
4. Machines (such as cars, electric toys, adding machines and so forth.)
5. Numbers (such as figuring, arithmetic and so forth.)
6. Adults (such as directing or helping grown-ups, selling things to them or being a leader for them.)
7. Music (such as playing a piano, dancing, singing and so forth.)
8. Children and Youth (such as teaching little children, playing with them and taking care of them.)
9. Science (such as studying about electricity, the sun, the stars and so forth.)
10. Plants and animals (such as farming and growing things.)
11. Art (such as drawing, painting and so forth.)
12. Some other things not listed here. Write in your own answer ON YOUR ANSWER SHEET.

H How much do you think you will change in your ideas about what you will like to do 10 years from now?

Mark an X after the number of the answer you choose ON YOUR ANSWER SHEET. CHOOSE ONLY ONE.

1. Very much
2. Somewhat
3. Very little
4. Not at all
5. Don't know

DO NOT MARK THIS BOOKLET

I Of the people listed below, which TWO would you like to be?

Write the NUMBER of your FIRST CHOICE and the NUMBER of your SECOND CHOICE ON YOUR ANSWER SHEET.

GENERAL

1. Baseball player
2. Cannery worker
3. Custodian or janitor
4. Dancer or singer
5. Delivery man
6. Driver: truck, bus or taxi
7. Fireman
8. Fisherman
9. Football player
10. Foreman or supervisor
11. Gardener
12. Guard
13. Heavy machinery operater
14. Housewife
15. Mailman
16. Policeman
17. Rancher
18. Service station attendant
19. Serviceman: soldier, sailor, airman, marine
20. Stevedore
21. Stewardess
22. Usher & Usherette
23. Watchman

LIBERAL

24. Actor & actress
25. Architect
26. Commercial artist
27. Counselor
28. Inventor
29. Journalist & writer
30. Lawyer
31. Librarian
32. Minister or nun
33. Musician
34. Psychologist
35. Recreation leader
36. Social worker
37. Teacher
38. Therapist: physical or occupational

SCIENTIFIC

39. Bacteriologist
40. Biologist
41. Chemist
42. Dental hygienist
43. Dentist
44. Doctor
45. Engineer
46. Home economist
47. Laboratory technician
48. Mathematician
49. Nurse
50. Optometrist
51. Pharmacist
52. Physicist

BUSINESS

53. Accountant
54. Bookkeeper
55. Business owner
56. Clerk
57. Manager
58. Salesman
59. Secretary

TECHNICAL

60. Baker
61. Beautician
62. Butcher
63. Carpenter
64. Cook or chef
65. Draftsman
66. Electrician
67. Farmer
68. Machinist
69. Mason
70. Mechanic
71. Painter
72. Photographer
73. Pilot
74. Plumber
75. Printer
76. Repairman: radio, TV, washers, etc.
77. Tailor & seamstress
78. Waiter & waitress
79. Welder or sheet metal worker
80. I don't know
81. Other: Write in ON YOUR ANSWER SHEET.

J Please write out ON YOUR ANSWER SHEET the kind of work your father does.

K Now please write ON YOUR ANSWER SHEET the NUMBER of the job listed above under I, which is most like your father's job.

L Which ONE of the following statements is MOST true of you?

Mark an X after the number of the answer you choose ON YOUR ANSWER SHEET. CHOOSE ONLY ONE.

1. I want to quit school when I am 16 years old or before.
2. I want to finish high school and then go to a technical or vocational school right away.
3. I want to finish high school and then become a homemaker right away.
4. I want to finish high school and then get a job right away.
5. I want to finish high school and then enter the service as soon as I can.
6. I want to finish high school and go on to college right away.

M What kind of help or guidance do you need with your career planning? Write in on the back OF YOUR ANSWER SHEET.

Graduate Survey
May, 1960

SURVEY OF HIGH SCHOOL GRADUATES

QUESTION BOOKLET

The Joint Committee on Guidance and Employment of Youth is very much interested in your immediate plans. We have distributed this questionnaire to every high school senior in order to obtain information concerning the plans each of you may now have for the future. You can help us by answering every question as best you can. Your cooperation will be of great benefit to you, to succeeding students, and to your state and national officials.

There are no right and wrong, nor good and bad answers. We want to know only what you think, so please answer the questions not according to what you consider to be "good" answers, but according to how you actually feel now. Your answers will be kept confidential and will be used for research purposes only. After you have completed the questionnaire, please check to make sure that you have answered every question (A - M). Thank you for your help.

DO NOT MARK THIS BOOKLET

ALL ANSWERS ARE TO BE PLACED ON YOUR ANSWER SHEET.

HOW TO ANSWER THE QUESTIONS

Example: Question A, AFTER YOU LEAVE SCHOOL WHAT ARE YOUR EDUCATIONAL PLANS?

Jane plans to continue school at the University of Oregon, so she marks an X after the number 1 (yes) on her answer sheet. The instructions in the question booklet tell her that if her answer is yes, she is to go on and answer sections III, IV, and V. For section III, she writes in the number 5 (other college or university) since the U. of Oregon is not listed, and then writes in U. of Oregon immediately after the number on her answer sheet.

John, however, does not plan to continue school, so he marks an X after the number 2 (no) on his answer sheet. The instructions tell him that if his answer is no, he is to answer section II. After he answers section II, he goes on to Question B.

Read the instructions for each question carefully.

YOU ARE TO MARK YOUR ANSWERS ONLY ON THE ANSWER SHEET

FIRST: FILL IN PERSONAL INFORMATION AT TOP OF ANSWER SHEET.

AFTER YOU LEAVE SCHOOL

WHAT ARE YOUR EDUCATIONAL PLANS?

A

I. Do you think you will continue full-time with school after graduation?

1. Yes (If yes, answer III and IV below)
2. No (If no, answer II)
3. Cannot say (Go on to B father's occupation, page 3)

II. If you are not continuing

I will probably not continue for these reasons: (You may mark X on more than one.)

1. Lack of ability
2. Lack of funds
3. Grades too low
4. Lack of interest
5. Lack credits
6. Prefer to work
7. Prefer to get married
8. Enter military service
9. Family objection
10. Other: Write in your reason on the answer sheet

III. If you are continuing your education after graduation:

I will probably go on to: (Write in the NUMBER of your choice on the answer sheet. Select only one.)

College or University

1. University of Hawaii
2. Chaminade
3. Church College of Hawaii
4. Jackson
5. Other college or university. On the answer sheet write in "5" and the name of the school. (See questions IV and V.)

Business School

6. Honolulu Business College
7. Cannon
8. Other business school. On the answer sheet write in "8" and the name of the school.

Junior College

9. Woodbury
10. Armstrong
11. Compton
12. Maunaolu
13. Other junior college. On the answer sheet write in "13" and the name of the school.

Trade or Technical School

14. Honolulu Technical
15. Kapiolani
16. Other trade or technical school. On the answer sheet write in "16" and the name of the school.

Hospital School of Nursing

17. Queen's
18. St. Francis
19. Kuakini
20. Other hospital school of nursing. On the answer sheet write in "20" and the name of the school.

Other

21. Any other type of school. On the answer sheet write in "21" and the name of the school.

22. Cannot say. Not definite.

IV. Have you been accepted yet?

1. Yes
2. No

V. If you are continuing to a 4-year university or college, which program do you plan to study: Mark an X after the number on your answer sheet.

1. Liberal Arts - Humanities (art, literature, music, languages, etc.)
2. Liberal Arts - Social Sciences (psychology, sociology, pre-law, economics, etc.)
3. Liberal Arts - Science (physics, chemistry, biology, pre-med, etc.)
4. Education
5. Business
6. Nursing
7. Agriculture
8. Engineering
9. Cannot say.
10. Other. On the answer sheet write in "10" and name of program.

B FATHER'S OCCUPATION

I. Please write out ON YOUR ANSWER SHEET the kind of work your father does, or last did.

II. Now, please write ON YOUR ANSWER SHEET the NUMBER of the job listed below under C which is most like your father's job. Choose only one.

C OCCUPATIONAL LIST

BUSINESS

1. Accountant
2. Administrator
3. Bookkeeper
4. Business owner
5. Clerk
6. Manager
7. Salesman
8. Secretary
9. Stenographer

TECHNICAL

10. Baker
11. Beautician
12. Butcher
13. Carpenter
14. Cook or chef
15. Draftsman
16. Electrician
17. Farmer
18. Machinist
19. Mason
20. Mechanic
21. Painter
22. Phonographer
23. Pilot
24. Plumber
25. Printer
26. Repairman: radio, TV, washers, etc.
27. Tailor & Seamstress
28. Waiter & Waitress
29. Welder or sheet metal worker

LIBERAL

30. Actor & Actress
31. Architect
32. Commercial artist
33. Counselor
34. Inventor
35. Journalist & Writer
36. Lawyer
37. Librarian
38. Minister & Nun
39. Musician
40. Psychologist
41. Recreation leader
42. Social worker
43. Teacher
44. Therapist: physical or occupational

SCIENTIFIC

45. Bacteriologist
46. Biologist
47. Chemist
48. Dental hygienist
49. Dentist
50. Doctor
51. Engineer
52. Home economist
53. Laboratory technician
54. Mathematician
55. Nurse
56. Optometrist
57. Pharmacist
58. Physicist

GENERAL

59. Baseball player
60. Cannery worker
61. Custodian or janitor
62. Dancer or singer
63. Delivery man
64. Driver: truck, bus, or taxi
65. Fireman
66. Fisherman
67. Football player
68. Foreman or supervisor
69. Gardener
70. Guard or watchman
71. Heavy machinery operator
72. Housewife
73. Maid
74. Mailman
75. Policeman
76. Rancher
77. Service Station Attendant
78. Serviceman: marine, soldier, sailor, airman
79. Stevedore
80. Stewardess
81. Usher & Usherette

OTHER

82. I don't know
83. Other

D ETHNIC ORIGIN

My father is: Mark an X after the number of the answer you choose ON YOUR ANSWER SHEET. Choose only one.

1. Caucasian
2. Chinese
3. Hawaiian
4. Filipino
5. Korean
6. Japanese
7. Other
8. Mixed
9. I don't know

E GENERATION

Who is the first person in your family, on your father's side, to come to the U.S.? Mark an X after the number of the answer you choose ON YOUR ANSWER SHEET. Choose only one.

1. Father
2. Grandfather
3. Great grandfather or before
4. I don't know.
5. Cannot say. Family is Hawaiian.

F WHAT ARE YOUR VOCATIONAL PLANS?

I. What occupation do you hope eventually to enter? Write in the NUMBER of the occupation listed under C on your answer sheet.

II. Do you expect to enter permanent full-time civilian work next year?

1. Yes (If yes, answer III and IV.)
2. No (If no or cannot say, skip to G Apprenticeship)
3. Cannot say

III. What about working on the mainland?

1. Prefer not to go.
2. Plan to go this summer.
3. Plan to go this fall.
4. Plan to go later.

IV. Have you already accepted a job here or on the mainland?

1. Yes (If yes, answer V through VIII.)
2. No (If no, answer IX.)

IF YES

V. If "Yes" - is the job in the State of Hawaii? 1. Yes 2. No

VI. Is it: 1. Permanent
2. Temporary

VII. On the answer sheet, write in the name of the firm and its address.

VIII. Write in the NUMBER of the job listed above under C which is most like the one you have accepted.

IF NO

IX. Do you need help in getting a permanent job?

1. Yes (If yes, answer X and XI .)
2. No (If no, answer XI.)

X. Write in on the answer sheet the NUMBER of the job listed under C which you would like to have.

XI. Have you registered with the State Employment Service? 1. Yes
2. No

G APPRENTICESHIP

I. Do you plan to enter apprenticeship training?

1. Yes (If yes, answer II.)
2. No (If no or don't know, skip to H Summer Vacation Job.)
3. Don't know.

II. Write in on the answer sheet the NUMBER of the trade listed above under C in which you plan to enter apprenticeship training.

H SUMMER VACATION JOB

I. Do you plan to take a summer vacation job this year after graduation?

1. Yes (If yes, answer II.)
2. No (If no or cannot say, skip to J Military Service.)
3. Cannot say

II. Have you accepted one?

1. Yes (If yes, answer III and IV.)
2. No (If no, skip to J Military Service.)

III. Write in on the answer sheet the NUMBER of the job listed above under C which is most like the one you have accepted.

IV. Write in name and address of firm on the answer sheet.

J WHAT ABOUT MILITARY SERVICE?

I. Which best describes your plans. Mark X after the number on your answer sheet.

1. Plan to volunteer. (If you answered 1 or 2, answer II through V)
2. Expect to be drafted.
3. Do not plan to enter service. (If you answered 3 through 5, skip to K Other Plans)
4. Exempt
5. Cannot say

II. I will be on:
1. Active duty 2 or more years.
2. Active duty 6 months.
3. Don't know.

III. Which branch of the service?

1. Air Force
2. Army
3. Army Reserve
4. Coast Guard
5. Coast Guard Reserve
6. Marines
7. Marine Corps Reserve
8. National Guard
9. Navy
10. Navy Reserve
11. WAC, WAF, Women Marines
12. I don't know.

IV. When?

1. Next summer
2. Next fall
3. After this year
4. Not sure

V. After military service what are your plans?

1. Attend school
2. Seek employment
3. Other
4. Undecided

K OTHER PLANS

I. Do you have any plans other than work, school or military service?

1. Yes (If yes, answer II)
2. No (If no, skip to L Reasons for Present Plans)

II. I also plan to:

1. Join the merchant marine
2. Become a housewife
3. Care for my parents
4. If other, write in on answer sheet.

L REASONS FOR PRESENT PLANS

I. Which of the following played the greatest part in deciding your next plans (school, work, military service, etc.) after high school? You may mark X on more than one on your answer sheet.

1. Aptitude (I feel that I will be able to do well in what I plan to do.)
2. Chance to serve others (It will help me to be of greater service to people.)
3. Most practical thing to do (It will be useful to me later.)
4. Preparation for specialization (I want to prepare myself for specializing in some one thing.)
5. Security of employment (I will be sure of getting a job.)
6. Potential income (It will help me to earn a high salary.)
7. Independence (It will help me to stand on my own two feet and do things for myself and by myself.)
8. Opportunity for advancement (It will help me to get a good job in which I can get ahead in life.)
9. Easiest thing to do (What I plan to do is not hard for me to accomplish.)
10. Prestige (I will stand high among those who know me and I will be respected for what I do.)
11. Satisfaction from field (I am interested in the kind of thing I plan to do and enjoy it.)
12. Self improvement (I can help myself become a better person.)
13. Parenthood (It will help me to be a better mother or father someday.)
14. Some other reason not given here. Write in your reason on your answer sheet.

11. Which of the following influenced you the most in choosing your next plans (school, work, military service, etc.) after high school? You may mark X on more than one on the answer sheet.

1. Hobby (Things like building model airplanes or collecting records.)
2. Free time activities (Things like the boy or girl scouts or just the things I do outside of school when I have free time.)
3. High school teacher (Any high school teacher I have had.)
4. Parents (My mother and father.)
5. High school courses (What I have learned in my classes at school.)
6. Work experience (I have had some experience with the kind of thing I plan to do.)
7. Friends (Talking things over with my friends.)
8. Relatives (Talking to my aunts, uncles, cousins, brother or sister.)
9. High school counselor (I have talked with the school counselor about my plans.)
10. Aptitude and Interest tests (Tests I have taken to find out what I am good at doing and what I like to do best.)
11. Random choice (First thing I thought of. I did not think about plans after high school till now.)
12. Career Day Program (The kind of program we have at school that is all about career possibilities.)
13. Movies and T.V. (I have seen on T.V. and in the movies the kind of thing I plan to do.)
14. People in the field (I have talked to people who are doing the kind of thing I plan to do.)
15. ROTC (The training I received in my ROTC program.)
16. Some other reason not given here. Write in your own reason on your answer sheet.

III. Which of the following interests contributed to your choice of next plans (school, work, military service, etc.) after high school? You may select more than one.

1. Words (such as writing, reading, speaking and so forth.)
2. Ideas (such as planning, thinking about things and so forth.)
3. Food (such as cooking, baking and so forth.)
4. Machines (such as cars, appliances, calculators and so forth.)
5. Numbers (such as figuring, arithmetic and so forth.)
6. Adults (such as directing or helping grown-ups, selling things to them or being a leader for them.)
7. Music (such as playing a piano, dancing, singing and so forth.)
8. Children and Youth (such as teaching little children, playing with them and taking care of them.)
9. Science (such as studying about living things, the heavenly bodies and so forth.)
10. Plants and animals (such as farming and growing things.)
11. Art (such as drawing, painting and so forth.)
12. Some other things not listed here. Write in your own answer on your answer sheet.

M HOW SURE ARE YOU OF YOUR PLANS AFTER GRADUATION?

Are you: Mark X after number on answer sheet.

1.	Absolutely sure	(at least 99% sure)
2.	Very sure	(at least 75% sure)
3.	Fairly sure	(at least 50% sure)
4.	Not sure	(at least 25% sure)
5.	Completely unsure	(only 1% sure)

N I NEED THE FOLLOWING KINDS OF HELP WITH MY CAREER PLANNING: You may mark X on more than one on your answer sheet.

1. Information about aptitudes and interests.
2. Educational-vocational information.
3. Finding a job.
4. Counseling interview.
5. Interview with individual on the job.
6. Scholarships and financial aids.
7. Military obligations.
8. Others

This survey is jointly sponsored by the Department of Labor and Industrial Relations, Department of Public Instruction, and the University of Hawaii, State of Hawaii, and the U.S. Office of Education, Department of Health, Education, and Welfare.

Graduate Survey
May, 1960

PLEASE MARK X OR PRINT
ANSWERS TO THE FOLLOWING

ANSWER SHEET

Please Print

Name____________________________________ Date________________________
(Last Name) (First) (Middle)

Please Print

School__________________________ Age____ Grade____ Sex: Male____ Female______

Address____
(Your present address or mailing address where you can be reached in future.) (City)

Number of years you have attended school in Hawaii________ Telephone____________

A Educational Plans

I. Continuing full-time with school next year? 1.___ 2.___ 3.___

II. Reasons for not continuing: 1.___ 2.___ 3.___ 4.___ 5.___ 6.___ 7.___ 8.___ 9.___ 10.________________

IF YES

III. Probably go on to: NUMBER of choice:____________________ (Write in) ☐ Number

IV. Accepted yet? . . . . 1.___ 2.___

V. What study program? . . . . 1.___ 2.___ 3.___ 4.___ 5.___ 6.___ 7.___ 8.___ 9.___ 10.________________ (Write in)

B Father's Occupation

I. Kind of work your father does:______________________________ (Write in)

II. NUMBER of job under C which is most like your father's: . . . . . ☐ Number

D Ethnic Origin: Father's: 1.___ 2.___ 3.___ 4.___ 5.___ 6.___ 7.___ 8.___ 9.___

E Generation: First in family to come to U.S. . . . . 1.___ 2.___ 3.___ 4.___ 5.___

F Vocational Plans

I. NUMBER of occupation under C you hope eventually to enter: . . ☐ Number

II. Entering full-time civilian work next year? . . . . 1.___ 2.___ 3.___

III. What about working on the mainland? . . . . 1.___ 2.___ 3.___ 4.___

IV. Have you already accepted a job? . . . . 1.___ 2.___

IF YES

V. In State of Hawaii? . . . . 1.___ 2.___

VI. Is the job permanent or temporary? . . . . 1.___ 2.___

VII. Name and address of firm:______________________________ (Write in)

VIII. NUMBER of job under C you have accepted: . . . . ☐ Number

IF NO

IX. Do you need help in getting a permanent job? . . . . 1.___ 2.___

X. NUMBER of job under C you would like to have: . . . . ☐ Number

XI. Registered with the State Employment Service? . . . . . 1.___ 2.___

PLEASE MARK (X) OR PRINT ANSWERS TO THE FOLLOWING

G **Apprenticeship**

I. Do you plan to enter apprenticeship training? . . . . . . 1.___ 2.___ 3.___

II. **NUMBER** of trade listed under **C** you plan to enter: . . . . ☐ Number

H **Summer Vacation Job**

I. Do you plan to take a summer vacation job? . . . . 1.___ 2.___ 3.___

IF YES

II. Have you already accepted a summer job? . . . . 1.___ 2.___

III. **NUMBER** of job under **C** most like job you have accepted: . . . ☐ Number

IV. Name and address of firm: ______________________ (Write in)

J **Military Service**

I. Which best describes your plans? . . . . . 1.___ 2.___ 3.___ 4.___ 5.___

IF YES

II. How long will you be on active duty?. . . . . 1.___ 2.___ 3.___

III. Which branch of the service? . . 1.___ 2.___ 3.___ 4.___ 5.___ 6.___ 7.___ 8.___ 9.___ 10.___ 11.___ 12.___

IV. When will you be entering? . . . . 1.___ 2.___ 3.___ 4.___

V. Plans after military service? . . . . 1.___ 2.___ 3.___ 4.___

K **Other Plans**

I. Plans other than work, school or military service? . . . . 1.___ 2.___

II. Also plan to: 1.___ 2.___ 3.___ 4.______________________ (Write in)

L **Reasons for Present Plans**

I. Which of the following played the greatest part in deciding your plans?

1.___ 2.___ 3.___ 4.___ 5.___ 6.___ 7.___ 8.___ 9.___

10.___ 11.___ 12.___ 13.___ 14.______________________ (Write in)

II. Which of the following influenced you the most in choosing your plans?

1.___ 2.___ 3.___ 4.___ 5.___ 6.___ 7.___ 8.___ 9.___ 10.___

11.___ 12.___ 13.___ 14.___ 15.___ 16.______________________ (Write in)

III. Which of the following interests contributed to your choice of plans?

1.___ 2.___ 3.___ 4.___ 5.___ 6.___ 7.___ 8.___ 9.___

10.___ 11.___ 12.______________________ (Write in)

M **How Sure Are You of Your Present Plans?** 1.___ 2.___ 3.___ 4.___ 5.___

N **Career Planning Help:** 1.___ 2.___ 3.___ 4.___ 5.___ 6.___ 7.___ 8.___

What I Want To Do
April 1960

REPORT FORM

ADMINISTRATION OF WHAT I WANT TO DO

School________________________________ Grade________ Date__________________

Number of question booklets received______________ Returned______________

Number of answer sheets received__________________ Returned: Used___ Unused___

Number of pupils estimated absent__________________

If any unusual incidents or deviations from good standard testing procedure occured, please describe briefly.

It will be helpful for us to know some of the questions your pupils may have asked in answering the survey, especially if they indicated unusual insight, misunderstandings, etc. Please write them below:

Can you think of any recent activities in your school which may have influenced the results? Career days, panel discussions, guidance units on educational opportunities, etc. Please list them with date.

General comment. Your opinion. Reactions of pupils in your school. Teachers?

TERRITORY OF HAWAII Rev. Feb. 1959
UNIVERSITY OF HAWAII OFFICE OF STUDENT PERSONNEL
IN COLLABORATION WITH
JOINT COMMITTEE ON GUIDANCE AND EMPLOYMENT OF YOUTH

SURVEY OF 1959 UNIVERSITY SENIORS AND GRADUATE STUDENTS

What are your plans after you have your degree, so far as you can determine right now? You will be helping both yourself, succeeding students and Territorial officials if you will complete the following questionnaire carefully. Please return during registration to the desk at Hemenway Hall while picking up your IBM cards.

THANK YOU

ANSWER EVERY QUESTION PRECEDED BY #.

#1. Name of College:

Arts and Sciences	☐ 1	Bus. Admin.	☐ 5
Applied Science	☐ 2	Grad. School	☐ 6
Teachers College	☐ 3	Social Work	☐ 7
Agriculture	☐ 4		

#2. Degree: BA ☐ 1 BBA ☐ 2 BS ☐ 3 BEd ☐ 4 MS ☐ 5 MA ☐ 6 Other ☐ 7

#3. When will you complete the requirements for graduation?

February 1959 ☐ 1 June 1959 ☐ 2 August 1959 ☐ 3

#4. Curriculum or major ____________________ Today's date __________

#5. Please Print ____
(Last Name) (First) (Middle)

#6. Sex: Male ☐ 1 Female ☐ 2 #7. Age in years ☐

______________________________ (Permanent address) ______________ (Telephone)

______________________________ (Local Address) ______________ (Local Phone)

AFTER YOU LEAVE SCHOOL --

#8. Mark (X) for any and all plans which you have within six months after graduation:

Full-time, permanent or temporary civilian job (40 or more hours per week)	☐ 1
Military service within six months	☐ 2
More education within six months	☐ 4
Part-time job (less than 40 hours per week)	☐ 8
Internship or graduate assistantship	☐ 16
None of the above	☐ 0
Cannot say at this time	☐ 32

Now please go back and circle the box opposite the one plan of action which you are most likely to follow immediately after graduation.

Graduation survey -- Page 2   ANSWER EVERY QUESTION MARKED #.

9. If you have definite plans other than finding a job, service, or going to school, please specify:

____

WHAT ABOUT YOUR WORK PLANS? (Even if you do not plan to work immediately after graduation, please answer every question.)

#10. When you do go to work, would you accept employment in your field on the mainland? . . . . . . Yes ☐ 1 No ☐ 2 ? ☐ 3

#11. Do you   plan to go to the mainland for a full time civilian job within 6 mos. after graduation? Yes ☐ 1 No ☐ 2 ? ☐ 3

#12. Have you had previous paid work experience? . . . Yes ☐ 1 No ☐ 2 ? ☐ 3

#13. Specifically, when do you plan to work? (Any type of paid civilian employment. Please check ONE only).

- Already working . . . . ☐ 1
- Immediately after graduation (next few weeks) . ☐ 2
- Within six months after graduation. . . . . ☐ 3
- Later than six months . . . . ☐ 4
- Not sure . . . . ☐ 5
- Not in foreseeable future . . . . ☐ 6

#14. What type of civilian work are you planning on within six months after graduation? (Please check ONE only.)

- Full-time summer job only . . . . ☐ 1
- Part-time summer job only . . . . ☐ 2
- Temporary full-time job . . . . ☐ 3
- Temporary part-time job only . . . . ☐ 4
- Permanent full-time civilian job . . . . ☐ 5
- Other plans, will not be working . . . . ☐ 6
- Not sure . . . . ☐ 7

#15. How about job hunting within six months after graduation? (Mark ONE only)

- Already have accepted job . . . . ☐ 1
  - What will be your job Title ________________ 9
- Need help from U.H. in getting permanent job. . ☐ 2
- Need help from U.H. in getting temporary job .. ☐ 3
  - What kind of job do you want ________________ 9
- Will get my own job without help . . . . ☐ 4
- Other plans, will not work . .. . ☐ 5
- Not yet sure about job hunting . . . . ☐ 6

#16. What about MILITARY SERVICE? (Check ONE ONLY)

Exempt because of sex, health, etc. . . . . ☐ 1
Already completed . . . . ☐ 2
Already in service . . . . ☐ 3
Expect to enter military service . . . . ☐ 4

If you expect to enter military service:

17. Approximately when (after graduation)?
Immediately . . . . ☐ 1
Within six months . . . . ☐ 2
Later than 6 months . . . . ☐ 3
Not sure . . . . ☐ 4

18. Which branch of service do you expect to enter?
Army . . . . ☐ 1
Navy . . . . ☐ 2
Air Force . . . . ☐ 3
Other . . . . ☐ 4
Not sure . . . . . ☐ 5

#19. What about plans for FURTHER EDUCATION? (Check ONE only)

Do not plan to continue . . . . ☐ 1
Have not yet decided . . . . ☐ 2
Probably attend U. of Hawaii . . . . ☐ 3
Probably attend other local school. . . . . . . ☐ 4
Probably attend mainland school . . . . ☐ 5 (Specify below)

____________________ Name of school or college you plan to attend ____________ Location 9

If you plan to continue your education:

20. When? (Check ONE only)
Beginning in summer of 1959 . . . . ☐ 1
Beginning in fall of 1959 . . . . ☐ 2
One year later - 1960 . . . . ☐ 3
Indefinite . . . . ☐ 4

21. What kind of course do you plan to take? (Check ONE only)

Accounting . . . . ☐ 1
Agriculture . . . . ☐ 2
Architecture . . . . . . ☐ 3
Business Administration. ☐ 4
Chemistry . . . . ☐ 5
Dentistry . . . . ☐ 6
Education. . . . . ☐ 7
Engineering . . . . ☐ 8
Fine Arts . . . . ☐ 9
Guidance & Counseling .. ☐ 10
Government . . . . ☐ 11
Home Economics . . . . . ☐ 12
Journalism . . . . ☐ 13
Law . . . . ☐ 14
Mathematics . . .. ☐ 15
Medicine . . . . . ☐ 16
Nursing . . . . . . ☐ 17
Psychology . . . . ☐ 18
Social Work . . .. ☐ 19
Sociology . . . .. ☐ 20
Other ____________ 21
Undecided . . . . ☐ 22

21a. Enter the number of your first alternative choice

____

ANSWER EVERY QUESTION MARKED #

#22. Within 6 months after graduation do you plan to combine in some way education and paid employment?

Yes ☐ 1 No ☐ 2 ? ☐ 3

23. If yes, indicate the most probable types:

- Intern . . . . ☐ 1
- Fellowship or scholarship . . . . ☐ 2
- Graduate assistantship . . . . ☐ 3
- School & part-time job outside . . . . . . ☐ 4
- School & full-time job outside . . . . . . ☐ 5
- Summer job followed by school only . . . . ☐ 6
- Not sure . . . . ☐ 7
- Other ______________________________ 9

#24. Do you wish further assistance in planning your career?

Yes ☐ 1 No ☐ 2 ? ☐ 3

25. If yes, please check kind of assistance desired:

- More information about my aptitude and interests ☐ 1
- General counseling interview . . . . ☐ 2
- More occupational information . . . . ☐ 3
- information about graduate schools, etc. . . . . ☐ 4
- Other ______________________________ ☐ 9

#26. What occupation do you hope eventually to enter: (Check one only)

- Accounting . . . . ☐ 1
- Agriculture . . . . ☐ 2
- Art . . . . ☐ 3
- Bacteriology . . . . ☐ 4
- Biology . . . . ☐ 5
- Business (Admin., Sales; Personnel) ☐ 6
- Chemistry . . . . ☐ 7
- Dietitics . . . . ☐ 8
- Engineering . . . . ☐ 9
- Government service . . . . ☐ 10
- Guidance and Counseling . . ☐ 11
- Law . . . . ☐ 12
- Library work . . . . ☐ 13
- Medical Technology . . . . ☐ 14
- Medicine . . . . ☐ 15
- Military Service . . . . . ☐ 16
- Nursing . . . . ☐ 17
- Recreation Leadership . . . ☐ 18
- Social Work . . . . ☐ 19
- Speech Therapy . . . . . . ☐ 20
- Teaching . . . . ☐ 21
- Undecided . . . . ☐ 22

Other . . . ☐ 99 Please state ______________________________

ANSWER EVERY QUESTION MARKED #

#27. What is your major or curriculum?

Applied Sciences

1 ☐ Civil Engineering
2 ☐ General Engineering
3 ☐ Pre-Architecture
4 ☐ Medical Technology
5 ☐ Nursing
6 ☐ Recreation Leadership

Education

7 ☐ Pre-School Primary
8 ☐ Elementary
9 ☐ Voc. Ed. Home Economics
10 ☐ Voc. Ed. Agriculture
11 ☐ Dental Hygiene
12 ☐ Secondary

Agriculture

13 ☐ General Agriculture
14 ☐ Vocational Agriculture
15 ☐ Tropical Crop Prod.
16 ☐ Technical Agriculture
17 ☐ Home Economics General
18 ☐ Vocational Home Ec.
19 ☐ Institutional Mgmt.
20 ☐ Foods and Nutrition

Business Administration

21 ☐ General Business
22 ☐ Banking & Finance
23 ☐ Personnel Industrial Rela.
24 ☐ Accounting
25 ☐ Merchandising
26 ☐ Office Management

Arts and Sciences

27 ☐ Anthropology
28 ☐ Art
29 ☐ Bacteriology
30 ☐ Botany
31 ☐ Chemistry
32 ☐ Chinese
33 ☐ Drama
34 ☐ Economics
35 ☐ English
36 ☐ Entomology
37 ☐ French
38 ☐ Geography
39 ☐ German
40 ☐ Government
41 ☐ History
42 ☐ Japanese
43 ☐ Mathematics
44 ☐ Metereology
45 ☐ Music
46 ☐ Philosophy
47 ☐ Physics
48 ☐ Psychology
49 ☐ Religion
50 ☐ Sociology
51 ☐ Spanish
52 ☐ Speech
53 ☐ Zoology
54. Other __________ 99

#28. If you were starting as a freshman again, would you choose the same major?

Yes	No	?
☐	☐	☐
1	2	3

29. If no, list number of curriculum above you would choose (ONE only) ____________________.

ANSWER EVERY QUESTION MARKED #

#30. So far as you can tell which of the following played the greatest part in your choice of a major or curriculum? (Mark X on one or more)

Aptitude ☐ 1
Chance to serve others ☐ 2
Easy courses ☐ 3
Fastest path to a degree ☐ 4
Independence ☐ 5
Opportunities for advancement ☐ 6
Potential income ☐ 7
Practicality of subject ☐ 8
Preparation for specialization ☐ 9
Prestige ☐ 10
Satisfaction from the field (Interest) ☐ 11
Security of employment (Job demand) ☐ 12
Self improvement ☐ 13
Other ____________________ ☐ 99

#31. So far as you can tell, which of the following influenced you the most in choosing your major or curriculum? (Mark X on one or more).

College courses ☐ 1
High school courses ☐ 2
Hobby ☐ 3
Work experience ☐ 4
Co-curricular activity ☐ 5
Aptitude and interest tests ☐ 6
High school teacher ☐ 7
College instructor ☐ 8
College counselor ☐ 9
High school counselor ☐ 10
Friends ☐ 11
Parents ☐ 12
Relatives ☐ 13
Random choice ☐ 14
Other ____________________ ☐ 99

#32. Which of the following interests contributed to your choice of a major or curriculum? (Mark X in one or more).

Work with: Children and youth ☐ 1
Adults ☐ 2
Ideas ☐ 3
Numbers ☐ 4
Science ☐ 5
Machinery ☐ 6
Growing things ☐ 7
Food ☐ 8
Music or art ☐ 9
Words ☐ 10
Other ____________________ ☐ 99

33. Racial ethnic background: (optional)

Caucasian ☐1
Chinese ☐2
Hawaiian or Pt. Hawaiian ☐3
Japanese ☐4
Filipino ☐5
Korean ☐6
Other __________9

34. Your generation in U.S. on father's side (E.g.: Write "1" if you are an alien or naturalized citizen. "2" if your father is an alien or naturalized citizen and you were born on U.S. soil, etc.) __________

35. Father's Occupation (job title) ______________________________

#36. At this time how sure are you of your choice of a vocation? (Mark X in one).

Absolutely sure ☐1
Very sure ☐2
Fairly sure ☐3
Not sure ☐4
Completely unsure ☐5

#37. Did you take any of your college credits in College of General Studies evening courses at the University of Hawaii?

Yes	No	?
☐	☐	☐
1	2	3

37a. If yes, approximately how many hours? __________

CONFIDENTIAL

Your answers to the following questions will be detached and forwarded to concerned officials without identification.

#38. A. Name of your high school ______________________________
B. In what year did you graduate from high school __________
C. In what ways was your high school most helpful in preparing you for college study?

D. In what ways was your high school least helpful in preparing you for college study? (Continue to other side if more space desired)

PLEASE RETURN TO DESK IN HEMENWAY HALL WHILE PICKING UP YOUR IBM CARDS.

QUESTIONNAIRE FOR PARTICIPANTS ENROLLED IN PUBLIC SCHOOL ADULT EDUCATION CLASSES, SECOND SEMESTER JANUARY TO JUNE, 1960

To the Adult Participant:

This questionnaire is being given to everyone enrolled in the Department of Public Instruction's adult education program. We are constantly trying to improve these programs, but in order to do so we need more facts about the people who attend the different kinds of classes. Will you please help us by answering every question below as frankly and accurately as you can? The information will be used only in summary or statistical form and you need not sign your name. After you have finished, please check to make sure you have answered every question, then fold and seal in an envelope before handing it in. Thank you for your cooperation.

School ______________________ 1-3

1. Title of this class: ______________________ 4-6

2. Age to nearest birthday: ______ 7-8   3. Date of birth: month ______ 9-10
day ______ 11-12
year ______ 13-16

4. Sex: Male ______ 1
Female ______ 2 } 17

5. Are you now enrolled in any other DPI classes? Yes ______ 1 No ______ 2 18

If yes, please list: (1) ______________________ 19-21
(2) ______________________ 22-24

6. Racial background: (please print) ______________________

Also, please check the racial group listed below which you think is most nearly applicable to you. (Mark ONE only)

(1) Caucasian ______ 1
(2) Chinese ______ 2
(3) Cosmopolitan ______ 3
(4) Filipino ______ 4
(5) Haw'n. & Pt-Haw'n. ______ 5
(6) Japanese ______ 6
(7) Puerto Rican ______ 7
(8) Other ______ 8
25

7. Marital status: (1) Married ______ 1
(2) Widowed ______ 2
(3) Divorced ______ 3
(4) Never married ______ 4
26

8. Years of school: (Please circle the highest grade you have completed, either in Hawaii or elsewhere. Mark ONE only)

Grade: 1 2 3 4 5 6 7 8 9 10 11 12 } 27-28

College years: 1 2 3 4 } 29 Other ______________ (29-9)
(write in)

9. Present occupation: (Title of your job) ______________________

10. Which one of the following categories is most like your job? (Mark ONE only)

(1) Professional-Technical (doctor, artist, musician, etc.) ______ 1
(2) Farmer or Farm Manager (runs or owns a farm, etc.) ______ 2
(3) Manager, Official or Proprietor (superintendent, postmaster, owner of a store, etc.) ______ 3
(4) Clerical and Sales (insurance salesman, secretary, etc.) ______ 4
(5) Craftsman and Foreman (baker, mason, machinist, etc.) ______ 5 30
(6) Operative (bus driver, laundryman, welder, etc.) . . . . ______ 6
(7) Service worker (maid, waiter, fireman, soldier, etc.). . . ______ 7
(8) Laborer (stevedore, fisherman, etc.) . . . . ______ 8
(9) Housewife . . . . ______ 9
(10) Other . . . . ______
code 11th row (x row)

11. Employment status: (Please check ONE only)

(1) unemployed ______ 1 (3) employed ______ 3
(2) temporarily laid off ______ 2 (4) retired ______ 4 31
(5) scheduled to a new wage or salary job within 30 days ______ 5
(6) other ______________________ (write in) 9 ______

12. Residence: (1) How many years have you lived in Hawaii? ______ 32-33
(2) How many years have you lived in your present home? . . . . ______ 34-35
(3) Do you own your own home or rent? Rent ______ 1 Own ______ 2 } 36

13. Enrollment in DPI adult education classes:

(1) Have you taken adult education courses before? Yes ______ 1 No ______ 2 } 37

(2) What courses would you like to take next? Please list.

(a) Don't know ______ Code 9 on column 38

(b) ______________________________ 38-40

(c) ______________________________ 41-43

14. How do you feel about the course you are now taking? Does it fulfill your needs? Does it meet with your expectations? Has it been a satisfying experience?

Yes ______ 1 No ______ 2 Not sure ______ 3 44

15. Which of the following helped you to decide what you wanted to study? (Mark one or more)

(1) My hobby (collecting stamps, gardening) . . . . ________ 01
(2) My recreational activities (playing golf, bowling). . . . ________ 02
(3) My teacher (any teacher you have had) . . . . ________ 03
(4) My parents . . . . ________ 04
(5) High school courses I have taken . . . . ________ 05 45-46
(6) My work experience . . . . ________ 06
(7) My friends . . . . ________ 07
(8) My relatives . . . . ________ 08
(9) A counselor (someone I talked to in school) . . . . . . ________ 09
(10) Random choice (first thing I thought of) . . . . ________ 01
(11) My boss . . . . ________ 02 47-48
(12) My husband or wife . . . . ________ 03
(13) Some other reason not listed here. Please list
____ ________ 04
____ ________

16. Why did you choose the kind of courses you have taken and are now taking? (Mark one or more)

(1) Aptitude (I can do well in the courses) . . . . ________ 01
(2) Chance to serve others (I want to be able to help others later on) . . . . ________ 02
(3) Practicality of subject (The courses have practical value) ________ 03
(4) Preparation for specialization (I want to be a specialist) ________ 04
(5) Security of employment (It will help me to get a good job) ________ 05 52-53
(6) Potential income (It makes it possible for me to earn a larger income) . . . . ________ 06
(7) It is the fastest way for me to get a diploma . . . . ________ 07
(8) Opportunity for advancement (It will give me a chance to go up in life) . . . . ________ 08
(9) They are easy courses . . . . ________ 09
(10) Prestige (People will look up to me, and admire and respect me) . . . . ________ 01
(11) Satisfaction from field (I am interested in the subject and enjoy it). . . . . ________ 02
(12) Independence (I want to stand on my own two feet and do things for and by myself). . . . . ________ 03
(13) Self improvement (I want to become a better person) . . . . ________ 04 54-55
(14) I want to learn more about this country . . . . ________ 05
(15) It will help me to get my citizenship. . . . . ________ 06
(16) I want to learn how to speak and write English better . . . ________ 07
(17) It will help me to prepare for family living. . . . . . . ________ 08
(18) Some other reasons not listed here . . . . ________ 09

17. What are the kinds of things that you like and that helped you to choose the kind of courses you wanted to take? (Mark one or more)

Work with:

(1) Words (writing, reading and spelling) . . . . ——— 01
(2) Ideas (thoughts, thinking about things) . . . . ——— 02
(3) Food (cooking and baking) . . . . ——— 03
(4) Machines (cars, washing machines) . . . . ——— 04
(5) Numbers (figuring and arithmetic) . . . . ——— 05 59-60
(6) Adults (grown-ups) . . . . ——— 06
(7) Music (playing the piano and listening to records) . . ——— 07
(8) Children and Youth (teaching little children) . . . . ——— 08
(9) Science (about electricity, the sun and stars) . . . . ——— 09
(10) Plants and animals (farming and growing things) . . . ——— 01
(11) Art (drawing and painting) . . . . ——— 02 61-62
(12) Some other things not listed here ______________ ———
(write in) 03

18. Can you suggest ways to improve these classes? Write in the space provided below.

Revised September, 1959

UNIVERSITY OF HAWAII
Office of Student Personnel
and
Psychological Research Center

SURVEY OF ENTERING STUDENTS ON COLLEGE CHOICE

By means of this questionnaire, the University hopes to gather information about its incoming students which will enable faculty members and officials to provide more effective services. Please answer every question. Please return completed questionnaire either to Dispensary (Sept. 14-18 only) or to the Bureau of Testing and Guidance between 8:00-12:00, 1:00-4:00 before you register. A statement of clearance will be required.

1. Name____________________________ Date____________________

2. Sex: ____Male ____Female 3. Age in years ____

4. College credits already earned: Mark X. ☐ none (1) ☐ 1-10 (2) ☐ 11-20 (3) ☐ 21 or more (4)

5. College in which you have been accepted by group or curriculum. (Mark X before one only.)

Engineering

01 ☐ Civil Engineering
02 ☐ General Engineering
03 ☐ Electrical Engineering

Nursing

09 ☐ Nursing
10 ☐ Medical Technology

Business Administration

11 ☐ General Business
12 ☐ Banking & Finance
13 ☐ Accounting
14 ☐ Personnel Industrial Relations
15 ☐ Merchandising
16 ☐ Office Management

Education

04 ☐ Pre-School Primary
05 ☐ Elementary
06 ☐ Secondary
07 ☐ Dental Hygiene
08 ☐ Recreation

Agriculture

17 ☐ General Agriculture
18 ☐ Vocational Agriculture
19 ☐ Tropical Crop Production
20 ☐ Technical Agriculture
21 ☐ Home Economics General
22 ☐ Vocational Home Economics
23 ☐ Institutional Management
24 ☐ Foods and Nutrition

Arts and Sciences
(Answer both A and B)

A. Accepted in Group: ____I(Social Sciences) ____II(Languages, Literature & Art);
____III(Biological and Physical Science).

B. Of the following at the present time which one is your most probable major:

25 ☐ Anthropology
26 ☐ Art
27 ☐ Asian Studies
28 ☐ Bacteriology
29 ☐ Botany
30 ☐ Chemistry
31 ☐ Chinese
32 ☐ Drama
33 ☐ Economics
34 ☐ English
35 ☐ Entomology
36 ☐ French
37 ☐ Geography
38 ☐ German
39 ☐ Government
40 ☐ History
41 ☐ Japanese
42 ☐ Mathematics
43 ☐ Meteorology
44 ☐ Music
45 ☐ Philosophy
46 ☐ Physics
47 ☐ Pre-Architecture
48 ☐ Pre-Dentistry
49 ☐ Pre-Medicine
50 ☐ Psychology
51 ☐ Religion
52 ☐ Sociology
53 ☐ Spanish
54 ☐ Speech
55 ☐ Zoology
56 ☐ Other ______

College of General Studies

57 ☐ Part-time 58 ☐ Full-time, unclassified

6. (Answer one of the following:)
I am now accepted in my first choice of college and/or group or curriculum
______ 1
No, I would prefer to be in ____ 2 (Insert number from question 5)

7. At this time how sure are you of your choice of a field of study? (Mark X in one)

Absolutely sure	(at least 99% sure)		☐	1
Very sure	(" " 75% ")		☐	2
Fairly sure	(" " 50% ")		☐	3
Not sure	(" " 25% ")		☐	4
Completely unsure	(only 1% sure)		☐	5

8. Racial ethnic background (Optional)

Caucasian ☐ 1
Chinese ☐ 2
Hawaiian ☐ 3
Cosmopolitan ☐ 4
Japanese ☐ 5
Filipino ☐ 6
Korean ☐ 7
Other ☐ 8

9. Generation in U.S. on father's side. (You are second generation if your father is an alien or naturalized citizen and you were born on U.S. soil. Please approximate if you are not sure.) (Optional)
1 ☐
2 ☐
3 ☐
4 ☐
5 or over ☐

10. Father's present or last paid occupation:
Professional (minister, doctor, lawyer, etc.) ☐ 1
Semi-professional (announcer, technician) ☐ 2
Managerial or official (supervisor, store owner) ☐ 3
Clerical or sales (bookkeeper, typist) ☐ 4
Domestic or personal service (attendant, cook) ☐ 5
Skilled (Baker, Butcher) ☐ 6
Semi-skilled (truck driver ☐ 7
Unskilled (Laborer) ☐ 8
If not sure, write job title ☐ 9
____

11. What occupation do you hope eventually to enter: (Mark X one only)

Accounting	☐	01	Law	☐	14
Agriculture	☐	02	Library work	☐	15
Art	☐	03	Medical Technology	☐	16
Bacteriology	☐	04	Medicine	☐	17
Biology	☐	05	Military service	☐	18
Business (Administration	☐	06	Nursing	☐	19
			Recreation Leadership	☐	20
Sales	☐	07	Social Work	☐	21
Personnel)	☐	08	Speech therapy	☐	22
Chemistry	☐	09	Teaching	☐	23
Dietetics	☐	10	Undecided	☐	24
Engineering	☐	11	Other	☐	99
Government service	☐	12			
Guidance and counseling	☐	13			

Please state ______________________

12. Do you wish further assistance in planning your career? yes ☐ 1 no ☐ 2 ? ☐ 3

If yes please check kind of assistance desired:

- more information about my aptitude and interests ☐ 4
- general counseling interview ☐ 5
- more occupational information ☐ 6
- information about mainland colleges ☐ 7
- other ☐ 8

How about the following problems? (Answer every item X in appropriate column.)

		no problems	want help	can handle by self	not sure
13.	Study methods	1 ____	2 ____	3 ____	4 ____
14.	Finances	____	____	____	____
15.	Housing	____	____	____	____
16.	Part-time employment	____	____	____	____
17.	Making friends	____	____	____	____
18.	Cocurricular activities	____	____	____	____
19.	Social activities	____	____	____	____
20.	Selection of major	____	____	____	____
21.	Other	____	____	____	____

Please state ______________________

22. Do you plan to transfer to a college other than the University of Hawaii before earning your bachelor's degree yes ☐ 1 no ☐ 2 unsure ☐ 3

23. How do you feel now about education after earning your bachelor's degree?

(99%sure)	Very likely to attend graduate or professional school	☐	1
(75% ")	Probably	☐	2
(50% ")	Fairly sure	☐	3
(25% ")	Not sure	☐	4
(only 1 chance in 100)	Very unlikely	☐	5
Seems so far away and unreal I can't even guess		☐	6

24. So far as you can guess now, how sure are you of graduating from college?

Mark X one only

(99% sure) Very likely, barring acts of God beyond my control	☐	1
(75% ") Probably	☐	2
(50% ") Fairly sure	☐	3
(25% ") Not sure	☐	4
(only 1 chance in 100) Very unlikely	☐	5
Seems so far away and unreal I can't even guess	☐	6

(Your answers to the following questions are confidential and will be used only for research purposes. Please be as honest as you can.)

25. So far as you can tell which of the following played the greatest part in your choice of a college (or curriculum, if you have already narrowed your choice)? (Mark X on one or more)

Aptitude	☐	01	Independence	☐	08
Chance to serve others	☐	02	Opportunity for advancement	☐	09
Practicality of subject	☐	03	Easy courses	☐	10
Preparation for specialization	☐	04	Prestige	☐	11
Security of employment (job demand)	☐	05	Satisfaction from field (interest)	☐	12
Potential income	☐	06	Self improvement	☐	13
Fastest path to a degree	☐	07	Other ____________ Please state	☐	99

26. So far as you can tell, which of the following influenced you the most in choosing your college or curriculum. (Mark X on one or more)

College courses	☐	01
Hobby	☐	02
Co-curricular activity	☐	03
High school teacher	☐	04
Random choice	☐	05
Parents	☐	06
High school counselor	☐	07
Aptitude and Interest tests	☐	08
High school courses	☐	09
Work experience	☐	10
High school teacher	☐	11
Friends	☐	12
College instructor	☐	13
Relatives	☐	14
Other ____________ Please state	☐	99

27. Which of the following interests contributed to your choice of your college (or curriculum). (Mark X on one or more)

Work with

Words	☐	01
Food	☐	02
Machinery	☐	03
Numbers	☐	04
Adults	☐	05
Music	☐	06
Children & Youth	☐	07
Science	☐	08
Plants & animals	☐	09
Art	☐	10
Other ____________ Please state	☐	99

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